

1963



FLORIDA STATE BOARD OF HEALTH

1963

ANNUAL REPORT

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Annual Report

State Board of Health

State of Florida

1963

The following reports will be published separately:

SUPPLEMENT I — FLORIDA VITAL STATISTICS, 1963

SUPPLEMENT II — FLORIDA MORBIDITY STATISTICS, 1963

WILSON T. SOWDER, M.D.

STATE HEALTH OFFICER

JACKSONVILLE, FLORIDA

The Honorable Eugene G. Peek, M.D., President
Florida State Board of Health
Ocala, Florida

Dear Dr. Peek:

I herewith submit the annual report of the Florida
State Board of Health for the year ending December 31,
1963.

Sincerely yours,

WILSON T. SOWDER, M.D., M.P.H.
State Health Officer

May 1, 1964
Jacksonville, Florida

His Excellency, Farris Bryant
Governor of Florida
Tallahassee, Florida

Sir:

I beg to hand you herewith a report of the Florida
State Board of Health for the period January 1, 1963, to
December 31, 1963, inclusive.

Respectfully submitted,

EUGENE G. PEEK, M.D.
President

May 1, 1964
Ocala, Florida

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Members of the
FLORIDA STATE BOARD OF HEALTH

EUGENE G. PEEK, M.D., *President*
Ocala

T. M. CUMBIE, Ph.G., *Vice President*
Quincy

LEO M. WACHTEL, M.D.
Jacksonville

F. P. MEYER, D.D.S.
St. Petersburg

W. S. HORN, D.O.
Palmetto

OFFICIAL STAFF FLORIDA STATE BOARD OF HEALTH

December 31, 1963

DIRECTORS

State Health Officer.....	Wilson T. Sowder, M.D., M.P.H.
Coordinator of Research	
Assistant State Health Officer.....	Albert V. Hardy, M.D., Dr.P.H.
Encephalitis Research Center	
Assistant State Health Officer.....	James O. Bond, M.D., M.P.H.
Coordinator of Training.....	Robert V. Schultz, M.D., M.P.H.
Division of Health Education.....	Elizabeth Reed, R.N., B.S.
Librarian.....	Tomma Pastorett, B.S., M.A.
Division of Personnel.....	Miles T. Dean, M.A.
Division of Public Health Nursing.....	Ruth E. Mettinger, R.N.
Bureau of Dental Health.....	Floyd H. DeCamp, D.D.S.
Bureau of Entomology.....	John A. Mulrennan, B.S.A.
Entomological Research Center.....	Maurice W. Provost, Ph.D.
Bureau of Finance and Accounts.....	Fred B. Ragland, B.S.
Assistant Director.....	Paul R. Tidwell, B.B.A.
Purchasing Agent.....	Frank E. Craft, B.S., B.A.
Bureau of Laboratories.....	Nathan J. Schneider, Ph.D.
Miami Regional Laboratory.....	Dwight E. Frazier, M.S.
Orlando Regional Laboratory.....	Max T. Trainer, M.S.
Pensacola Regional Laboratory.....	Emory D. Lord, Jr., B.S.
Tallahassee Regional Laboratory.....	Robert A. Graves, M.S.
Tampa Regional Laboratory.....	H. D. Venters, B.S.
West Palm Beach Regional Laboratory.....	Lorraine Carson
Apalachicola Marine Laboratory.....	Bernard E. Kane, B.S.
Bureau of Local Health Services	
Assistant State Health Officer.....	L. L. Parks, M.D., M.P.H.
Assistant Director.....	Hubert U. King, M.D.
Division of Nutrition.....	Mary Brice Deaver, M.S.
Division of Sanitation.....	A. W. Morrison, Jr., R.S.
Bureau of Maternal and Child Health	
Assistant State Health Officer.....	L. L. Parks, M.D., M.P.H.
Bureau of Mental Health	
Assistant State Health Officer.....	Wayne Yeager, M.D., M.P.H.
Associate Director.....	Wade N. Stephens, M.D., M.P.H.
Assistant Director.....	Edward L. Flemming, Ed.D., M.P.H.
Bureau of Narcotics.....	Frank S. Castor, Ph.G.
Bureau of Preventable Diseases	
Assistant State Health Officer.....	C. M. Sharp, M.D.
Division of Epidemiology (on leave).....	E. Charlton Prather, M.D., M.P.H.
Division of Radiological and	
Occupational Health.....	Edwin G. Williams, M.D.
Division of Tuberculosis Control.....	Dwight Wharton, M.D.
Division of Veterinary Public Health.....	James B. Nichols, D.V.M.
Bureau of Sanitary Engineering.....	David B. Lee, M.S.Eng
Assistant Director.....	Sidney A. Berkowitz, M.S.Eng.
Division of Industrial Waste.....	Vincent D. Patton, M.S.S.E.
Division of Special Services.....	Charles E. Cook, C.E.
Division of Waste Water.....	Ralph H. Baker, Jr., M.S. San.Eng.
Division of Water Supply.....	John B. Miller, M.P.H.
Bureau of Special Health Services	
Assistant State Health Officer.....	Simon D. Doff, M.D., M.P.H.
Division of Chronic Diseases.....	J. E. Fulghum, M.D.
Division of Hospitals and Nursing	
Homes (acting).....	C. L. Nayfield, M.D., M.P.H.
Bureau of Vital Statistics.....	Everett H. Williams, Jr., M.S. Hyg.
Division of Data Processing.....	Arnold Kannwischer, B.S.
Division of Public Health Records.....	Oliver H. Boorde, B.S., B.A.
Division of Vital Records (acting).....	Everett H. Williams, Jr., M.S. Hyg.

DIRECTORS OF COUNTY HEALTH DEPARTMENTS

(As of December 31, 1963)

Alachua.....	Edward G. Byrne, M.D., M.P.H.
Bay.....	A. F. Ullman, M.D.
Brevard.....	T. Paul Haney, M.D., Dr.P.H.
Broward.....	Paul W. Hughes, M.D., M.P.H.
Collier.....	Clyde L. Brothers, M.D.
Dade.....	T. E. Cato, M.D., M.P.H.
Duval.....	T. E. Morgan, M.D., M.P.H.
Escambia.....	J. C. McSween, M.D.
Hillsborough.....	John S. Neill, M.D., M.P.H.
Lake.....	J. Basil Hall, M.D., M.P.H.
Lee.....	Joseph W. Lawrence, M.D.
Leon.....	Joseph M. Bistowish, M.D., M.P.H.
Manatee.....	George M. Dame, M.D.
Marion.....	P. H. Smith, M.D.
Monroe.....	John L. Ingham, M.D.
Okaloosa.....	Henry I. Langston, M.D., M.P.H.
Orange.....	Wilfred N. Sisk, M.D., M.P.H.
Palm Beach.....	C. L. Brumback, M.D., M.P.H.
Pinellas.....	William C. Ballard, M.D., M.P.H.
Polk.....	James F. Cason, M.D.
St. Johns.....	James C. Loranger, M.D.
Santa Rosa.....	A. E. Harbeson, M.D.
Sarasota.....	R. H. Veldhouse, M.D.
Seminole.....	Frank Leone, M.D.
Volusia.....	D. V. Galloway, M.D., M.P.H.
Baker-Nassau.....	B. F. Woolsey, M.D.
Calhoun-Jackson.....	Terry Bird, M.D., M.P.H.
Flagler-Putnam.....	James R. Sayers, M.D.
Gadsden-Liberty.....	B. D. Blackwelder, M.D., M.P.H.
Jefferson-Wakulla.....	L. L. Parks, M.D., M.P.H. (Acting)
Madison-Taylor.....	L. L. Parks, M.D., M.P.H. (Acting)
Osceola-Indian River.....	C. C. Flood, M.D., M.P.H.
Pasco-Sumter.....	William A. DeFries, M.D.
Bradford-Clay-Union.....	A. Y. Covington, M.D., M.P.H.
Charlotte-DeSoto-Hardee.....	E. J. McLaughlin, M.D.
Citrus-Hernando-Levy.....	Harold F. Bonifield, M.D., M.P.H.
Columbia-Hamilton-Gilchrist.....	F. Barton Wells, M.D.
Franklin-Gulf.....	Willa Dean Lowery, M.D., M.P.H.
Glades-Hendry-Highlands.....	William F. Hill, Jr., M.D., M.P.H.
Holmes-Walton-Washington.....	L. L. Parks, M.D., M.P.H. (Acting)
Martin-Okeechobee-St.Lucie.....	Neill D. Miller, M.D.
Suwannee-Dixie-Lafayette.....	J. Harland Paul, M.D., M.P.H.

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GENERAL ADMINISTRATION

1

WILSON T. SOWDER, M.D., M.P.H.
State Health Officer

The office of the State Health Officer is the "nerve center" of the State Board of Health (SBH) activities. A multitude of items involving all phases of the organization's activities are handled by this office. It is a difficult task to pick from these a few of the outstanding events or achievements of 1963 from among the many that took place. There were, however, several occurrences which should be mentioned because of their general effect on the health of the citizens of Florida.

On January 1, 1963, the State Health Officer returned to Florida after serving 14½ months as Chief of the Office of Aging of the U.S. Public Health Service (USPHS). His interest in this field of activity was stimulated by federal legislation for Medical Assistance to the Aged (Kerr-Mills Act) and by the passage of a law setting up a national health program for Chronic Illness and Aging. The former was implemented in Florida by state-appropriated funds in July 1963. Extensions and expansions in this and other indigent medical care programs went forward during the year, including nursing care in the home. With so many and varied activities of the SBH concerning the health of the older person, it was felt that more coordination was desirable. Malcolm J. Ford, M.D., Special Assistant to the State Health Officer, was given this responsibility.

Progress in the field of arthropod-borne disease control continued throughout the year. Funds were appropriated for support of the SBH Encephalitis Research Center in Tampa and a laboratory for the study of the dog fly and related entomological problems to be constructed in Panama City. Both of these are important not only to the health of the citizens of Florida but to the state's continued development as a tourist and recreation area.

Florida's progress as an industrial state has brought problems in air and water pollution. Modest additional state appropriations were received for an air pollution district in the Polk-Hillsborough County area. Growing citizen interest in urban areas has demonstrated the inadequate resources of the SBH in this field.

The increasing competence of the SBH and the county health departments (CHD) in the research field was recognized by the award of a General Research support grant to the SBH by the USPHS and by the appropriation of state funds for encephalitis research.

Mental health planning has occupied much of the time and talent of SBH and CHD employees as well as representatives of official and voluntary organizations who have an interest in this public health endeavor. An unusually large number of lay citizens have also been involved. All of this activity should result in an expanded and better coordinated program that will benefit the mentally ill and the mentally retarded.

The Florida State Board of Health is fortunate now in having 12 committees (councils, etc.) who advise it on various specific public health programs. Composed of experts in their fields plus lay representation in

most cases they make a tremendous contribution to the solution of many current health problems. New committees appointed this year were an Encephalitis Advisory Committee and a Public Health Nursing Committee.

The people of Florida as well as the State Board of Health owes a debt of gratitude to its employees for their outstanding contributions during this year.

STAFF ASSISTANCE

Although the State Health Officer receives assistance from all staff members, there are certain staff specialists who report directly to him.

The internal auditor is available for the study of fiscal problems. His primary responsibility is to conduct post audits of the financial transactions of the agency to determine that fiscal matters are kept within the purview of state and local laws and the policies of the SBH. The accounts of the CHDs continued to receive major attention during the year. Since the employment of an assistant, the accounts of 65 CHDs have been audited and one is in process. An external audit report covering the operations of a large CHD has been reviewed. The accounts of one CHD have been audited twice.

Activities of the staff attorney during the first half of the year were devoted primarily to legal review of proposed legislation prior to and during the 1963 session of the State Legislature. . . . During 1963, the Board for the first time sought court relief for air pollution abatement and for the second time assisted a municipality in defense of anti-fluoridation litigation. . . . The staff attorney is responsible for the supervision of the distribution of compiled agency regulations. Trends in the last quarter of 1963 indicate that problems involving litigation and enforcement will increase in future years.

During 1963, the news director sent 117 news stories to newspapers, radio and TV stations. Assistance was given these media on 126 occasions: supplying information; initiating stories, photos and interviews; and aiding representatives to obtain their own material for stories, photographs, interviews, TV sound and tape and editorials.

ACTIVITIES OF THE BOARD

January 4—Lakeland

1. Welcomed the return of Wilson T. Sowder, M.D., to his position as State Health Officer, Florida State Board of Health (SBH), after a leave of absence of 14 months during which time he occupied a position with the U.S. Public Health Service as Chief, Office of Aging.
2. The Board discussed the State Tuberculosis Board's offer to transfer a portion of land on the grounds of the Southwest Florida Tuberculosis Hospital to the State of Florida for the purpose of establishing a SBH Regional Laboratory in Tampa.

3. Approved a memorandum of Agreement regarding Laboratory Services between the SBH and State Tuberculosis Laboratory.
4. Discussed with Drs. Bond, Hardy and Mr. Mulrennan the encephalitis research project to be carried on in the Tampa Regional Laboratory with the aid and assistance of a grant from the National Institutes of Health in the amount of \$186,000.
5. Discussed a proposed Memorandum of Agreement regarding the Tampa Bay Regional Encephalitis Laboratory at the Southwest Florida Tuberculosis Hospital.
6. Discussed a proposed budget for encephalitis prevention and control in the state and suggested revisions to it; and further asked the State Health Officer to submit to them names of possible members to a Scientific Advisory Committee to assist the SBH in the encephalitis program.
7. Approved statements to the Interim Legislative Committee and its membership regarding the county health unit bill and one on medical services and advised Dr. Sowder to include his comments in a covering letter to the Interim Legislative Committee.
8. Approved postgraduate training for two public health nurses.
9. Approved a request from the Lake County Commissioners regarding the transfer of \$10,000 for the building of an auxiliary health center in Clermont.
10. Approved a revision of priorities for sewage treatment plant construction grants.
11. The Board commended Dr. Hardy for his work as Acting State Health Officer during Dr. Sowder's leave of absence.
12. The Board went on record as being grateful and commending Ashbel Williams, M.D., for the fine service rendered to the SBH while he was a Board member.
13. Dr. Peek advised the Board members that Leo Wachtel, M.D., had been appointed to fill the unexpired term of Ashbel Williams, M.D.

January 5—Lakeland

1. The Board held a hearing on air pollution in order to discuss some of the problems of the area.
2. The Board met with the Air Pollution Control Commission after the hearing.

February 12—Jacksonville

1. The Board members welcomed Leo M. Wachtel, M.D., as the new member replacing Ashbel Williams, M.D.
2. Approved an Agreement on cooperative procedures for administering and regulating the sanitary control of the shellfish industry by the SBH and the State Department of Conservation.

3. Discussed a request from John Neill, M.D., health officer of Hillsborough County Health Department (CHD), that the SBH reconsider and build the Tampa Regional Laboratory in connection with the CHD.
4. Approved the appointment of an Advisory Committee on Sanitary Engineering.
5. Approved a Memorandum of Agreement with the State Tuberculosis Board and the SBH regarding the Regional Encephalitis Laboratory in Tampa.
6. Approved the appointment of Lake Lytal to the Advisory Committee on the Hospital Service for the Indigent to replace Fred Gill.
7. Approved postgraduate training for Robert Schneider, biologist with the Bureau of Sanitary Engineering, beginning June 1963.
8. Approved recommendations submitted by the Air Pollution Control Commission and Mr. Lee regarding the air pollution situation in Lakeland.
9. Approved the continued employment of five persons beyond 70 years of age; and approved one to be not beyond that of June 30, 1963.
10. Approved the reclassifications of five Health Officers IV to Health Officers V.
11. Approved the appointment of James Nichols, DVM., as director of the Division of Veterinary Public Health, effective February 15.
12. Approved a bill to be entitled "An Act Amending Subsection 381.031, Florida Statutes, giving the State Board of Health the authority to regulate the handling of highly toxic materials in residential areas; and providing an effective date" to be submitted to the Legislature.
13. Discussed the proposed Mental Health Plan to be submitted to the U.S. Public Health Service for additional funds in the amount of approximately \$97,000 for planning in mental health.
14. Approved the transfer of the Division of Public Health Nursing to the Office of the State Health Officer.

March 24—Jacksonville

1. Approved a policy on the licensure of physicians.
2. Approved a policy regarding supplementation of salaries.
3. Approved the appointment of an Advisory Committee on Public Health Nursing.
4. Approved the appointment of an Advisory Committee on Encephalitis.
5. Approved certain amendments to laws governing programs of the State Board of Health to be submitted to the Legislature.

6. Approved the request from Highland County Board of County Commissioners and Highland CHD for release of funds for building of a health center.
7. Approved the request for certain changes in the School Rules and Regulations by the State Board of Beauty Culture.
8. Approved a policy for longevity pay increases for employees exempt from the Merit System.
9. Approved and appointed the members of the Board of Directors of the Florida Public Health Association to be members of the Insurance Committee of the SBH and stated that when the membership of the Board of Directors changes, the membership of the Insurance Committee changes accordingly.
10. Approved candidates for postgraduate training.

May 16—Hollywood

1. Rescinded regulations, Chapter 170 C-4, Individual Sewage Disposal, and reverted back to old Chapter V and those sections of other chapters which had to do with individual sewage disposal systems after discussion.
2. Approved an Agreement of Understanding on Septic Tank Permits in Monroe County.
3. Approved postgraduate training for public health nurse.
4. Approved a request from the Clay County Commission for the transfer of funds for the building of the CHD.
5. Approved the awarding of medical scholarships.
6. Approved a pilot study for oral cytology to be conducted in Duval County subject to the receipt of funds for the purpose.
7. Approved the establishment of three divisions in the Bureau of Vital Statistics as follows: Data Processing, Vital Records and Public Health Statistics.
8. Approved financial participation in a seminar to be held by the Arthritis and Rheumatism Foundation.
9. Approved study and lecture tour for Emile Van Handel, Ph.D.

July 14—Jacksonville

1. Discussed Monroe County septic tank problem with John M. Ingram, M.D. and Mr. Lee.
2. Welcomed Carlton P. Maddox as part-time attorney replacing Hans Tanzler who had been appointed as a judge in Duval County.
3. Approved policy regarding per diem of SBH employees.
4. Approved appointment of Senator Cliff Herrell and Representative Ray Mattox to Advisory Committee for the Hospital Service for the Indigent.

5. Approved certain physicians for an additional year of employment without a medical license.
6. Approved an amendment to the formula regarding county health unit funds.
7. Approved a candidate for an osteopathic scholarship.
8. Discussed the establishment of a dog fly laboratory.
9. Reaffirmed the policy of the SBH with regard to the employment of relatives and directed that this policy be applied to the student trainees employed.
10. Discussed a plan for publicity during epidemics.

October 6—Jacksonville

1. Approved regulations for the Medical Assistance to the Aged (MAA) Program.
2. Discussed a report on the construction of the Pensacola and Tampa Laboratory buildings as presented by Nathan J. Schneider Ph.D.
3. Received a report from Dr. Sowder on his trip to Ecuador.
4. Approved a site in Bay County for the construction of the dog fly laboratory.
5. Welcomed Malcolm Ford, M.D., as a member of the staff of the Florida State Board of Health.
6. Approved a travel fellowship for Simon Doff, M.D., for a period of six weeks.
7. Approved a leave of absence without pay for Albert V. Hardy, M.D., for a period of three months.
8. Discussed the resignation of W. L. Wright, M.D., director of the Bureau of Local Health Services.
9. Approved the recommendation of Dr. Sowder that L. L. Parks, M.D., be appointed as Acting Director of the Bureau of Local Health Services.
10. Received a report from Dr. Sowder regarding the release of funds for the Encephalitis Program and those for the Polk-Hillsborough Air Pollution Control District.
11. Discussed their relationship with the Air Pollution Control Commission.
12. Approved the request of the Lake County Commissioners to transfer \$3,000 from the county health unit fund for use in the construction of an auxiliary health center in Clermont.
13. Requested the State Health Officer to secure an up-to-date study of the health card situation to be brought to their attention at the next meeting.

December 8—Jacksonville

1. Discussed certain legal problems with regard to the air pollution problem.
2. Discussed the regulations regarding the fluoridation policy but took no action.
3. Received a report by George McCoy, M.D., on the Accident Prevention Program.
4. Approved the appointment of L. L. Parks, M.D., as director of the Bureau of Local Health Services.
5. Approved salary increases for the Health Officers V in CHDs.
6. Discussed the employment of David Crane, M.D., upon his return to the United States.
7. Approved a revision of the rules and regulations for the MAA Program.

COORDINATOR OF RESEARCH

ALBERT V. HARDY, M.D., Dr.P.H.

A major function of this coordinator is to assist others in the development of their own studies. Hence, most of the reports on research will be found elsewhere in the individual bureau chapters. The description of the work of the Entomological Research Center, which has attained national and international recognition, is a part of the report of the Bureau of Entomology. The recently established Encephalitis Research Center has had a busy and productive first year as described by its director in the pages following. The investigations of infections due to the Unclassified Mycobacteria have been carried on in close association with the Division of Tuberculosis Control in whose report this work is described. Cooperative studies in food sanitation have been initiated by the Bureau of Laboratories and the Division of Sanitation. In reports of these and other bureaus and divisions there will be a record of research, special studies, experimental programs and other activities designed to establish "more effective means" for the provision of public health service in Florida.

Similar investigations conducted as a part of county health departments (CHD) are not described as adequately. There are the varied studies in Pinellas County, all concerned with health problems and problems for the aging. An ongoing study is directed specifically to this broad objective. A more limited investigation is assessing the extra nursing needs of a retirement community. Through the cooperation of the University of Florida and the U.S. Public Health Service (USPHS), there was an exploratory approach to the study of senility. Also a study of accidents in the aging by the Division of Accident Prevention of USPHS has been established in close association with the Pinellas CHD.

There have been two major research interests in Dade County. In cooperation with the University of Miami Medical School there has

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been an active year of study and planning for research and service in the neurological and sensory diseases.

The ongoing Development Evaluation Clinic, initiated and conducted as a cooperative demonstration, is proving to be a very productive approach to finding "more effective means" for providing service to the mentally defective. Also, there have been studies of heart disease control in association with the National Children's Cardiac Hospital.

Currently, funds for research are more readily available than persons qualified by training and experience in community based research. With the support of a Research Training Grant, the advanced or prolonged training for research in the public health environment is being made available to a very limited number of selected candidates. This is deemed of the greatest importance in assuring the continued development of productive studies.

There were two favorable developments relating to the budget, during the year. The state legislature provided funds for encephalitis research, a modest allocation, but of significance in the recognition of the proper role of research within organized public health. Also from USPHS there was a "General Research Support Grant." This is made available to those institutions and organizations which have an established research program. This grant provides flexible funds which should aid in the organization and initiation of further public health research in Florida.

Kellogg Project

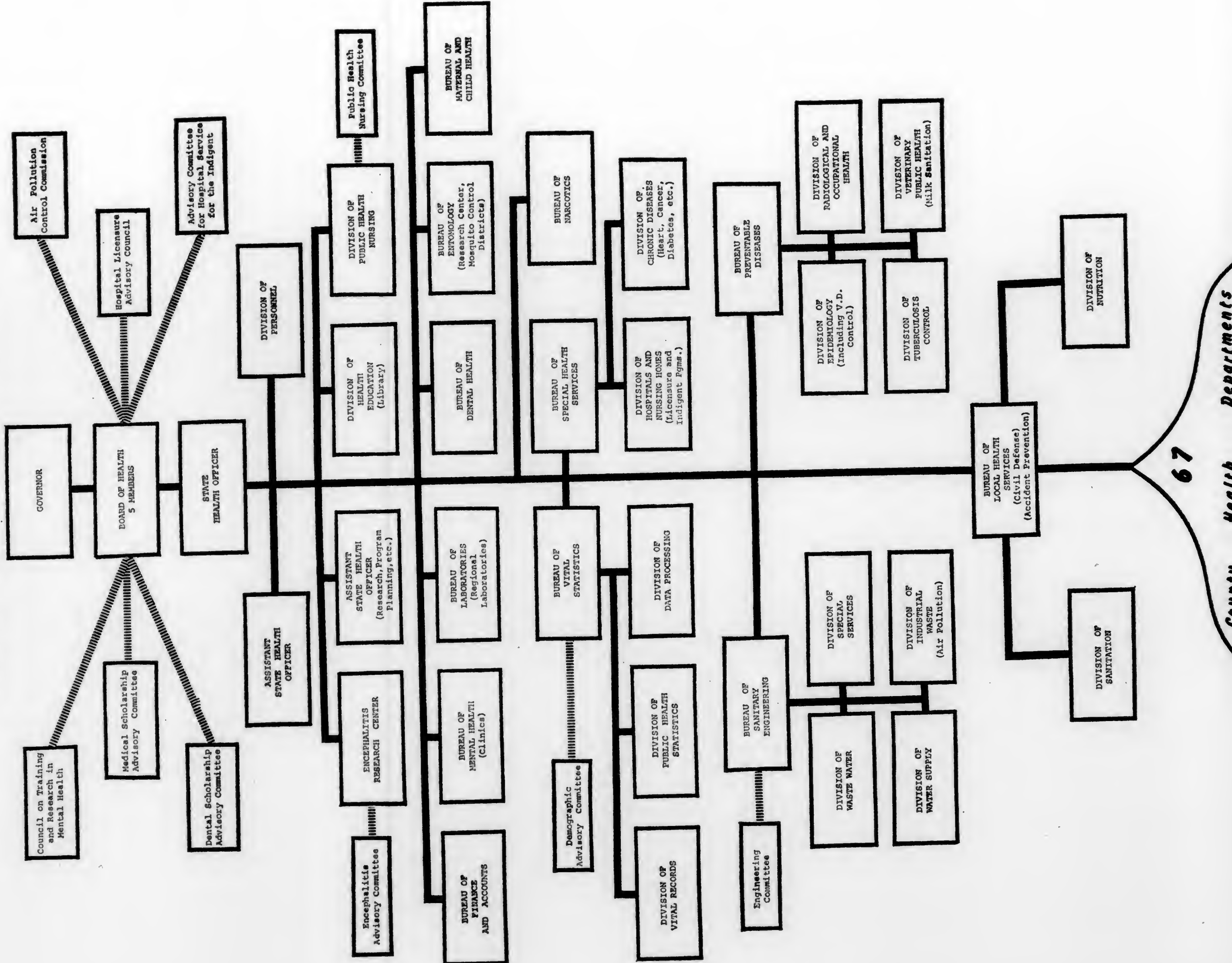
A project in *administrative research*, now in its fifth year, has been supported by funds from the Kellogg Foundation. During 1963 the system of evaluation for public health programs developed and tested during the preceding year was successfully applied to the demonstration program for which it was devised. During the latter part of the year, preparations were made to adapt the system for use in comprehensive, community-based mental health planning, and a survey was conducted in one county to develop guide lines for the adaption. Plans were made for an intensive study of personnel problems to be made in 1964. Consultation was offered to program directors, health officers and others in the revision of long range plans and in the development of administrative procedures.

COORDINATION OF TRAINING

ROBERT V. SCHULTZ, M.D., M.P.H.
Coordinator of Training

This new activity was established February 1, 1963, under the general direction of the State Health Officer. It is concerned with coordinating and providing assistance for program planning and arrangements incident to intra- and intermural training activities for personnel in all disciplines and departments of the State Board of Health (SBH) and county health departments (CHD). Such training programs may be conducted in whole or part, by SBH and CHD personnel in

Organizational Chart of the State Board of Health



related activities; jointly, in cooperation with institutions of higher learning; through scholarships sponsored by the SBH or certain federal traineeship programs and special grants, and through training courses scheduled by health related professions or organizations, hospitals and institutes. The Coordinator of Training is also responsible for the administration of the Summer Student Traineeship Program and the Post-graduate, Residency Training, Medical, Osteopathic and Mental Health Scholarship Programs for professional education.

The services of this office are available, upon request, to SBH and CHD directors, program supervisors and all personnel concerned with training activities. By attendance at workshops, seminars, orientation programs and other meetings, this office has acquired a framework of reference concerning the nature and scope of some of the training activities currently in operation. Because of the diversity and large number of training activities involved in the total program, it has been possible to date only to become reasonably familiar with some, acquainted with others and make plans to observe hitherto unvisited training activities at the earliest opportunity.

As with any new activity, time will also be required to acquaint all personnel concerned with the reciprocal relationships and services available to them from this office.

Of paramount importance in the development of these programs are the working relationships currently established with committees appointed by the State Health Officer concerned with specific scholarship programs; the "Advisory Committee on Training to the Coordinator of Training" appointed by the Florida Association of County Health Officers; bureau, division Directors of SBH and CHDs; training program supervisors and CHD personnel concerned with intermural or community training activities; the director, Division of Community Junior Colleges, State Department of Education; the director of the Florida Institute for Continuing University Studies (FICUS); the dean, Division of General Extension of FICUS, and certain faculty members of the universities and colleges of Florida and nearby states that have indicated a manifest interest in and are prepared to review proposals for participation in appropriate SBH training programs.

Public Health Residency Training Program

The State Board of Health offers an AMA-approved residency in public health. Under this program the following five physicians received appointments for resident training in public health (the dates residencies began are given):

R. Christopher Brown, M.D.	Palm Beach	July 1963
Antonio L. Court, M.D.	Hillsborough	July 1963
Richard A. Morgan, M.D.	Hillsborough*	July 1963
Frank Leone, M.D.	Seminole**	November 1962
Charles M. Bradley, M.D.	Volusia	November 1961

* Sponsored by United States Army.

**State level resident assigned to Seminole County under the supervision of Wilfred N. Sisk, M.D., M.P.H., Director, Orange County Health Department.

Student Traineeship Program

Each summer for a number of years, the SBH has offered temporary employment to a limited number of college and postgraduate students during the summer months. They are assigned to positions in activities related to their indicated or proposed careers in medicine, dentistry, sanitary engineering, the allied sciences and health related professions. During their period of employment, they assist in ongoing programs and in addition receive special training and supervision designed to orient them with the specific and over-all functions of the SBH and CHD programs and activities.

In 1963, there were 480 applications for this program. Of these, 71 were selected for employment at the central offices and in the regional laboratories of the SBH, the several regional offices of the Bureau of Sanitary Engineering, the Encephalitis Research Center in Tampa, and divisions or activities of the following counties: Alachua, Broward, Dade, Duval, Escambia, Gadsden, Hillsborough, Leon, Orange, Palm Beach, Polk and Sarasota.

SCHOLARSHIPS FOR PROFESSIONAL EDUCATION

The scholarship programs created by the 1955 Legislature for the study of medicine, dentistry and the several disciplines concerned with mental health were continued.

Scholarships for the study of medicine were awarded upon the recommendation of a seven-man advisory committee authorized by statute. The seven members were: George T. Harrell, M.D., Dean of the School of Medicine, University of Florida; John C. Finerty, Ph.D., Assistant Dean of the School of Medicine, University of Miami; Arthur J. Wallace, Jr., M.D., Tampa; James T. Cook, Jr., M.D., Marianna; David W. Goddard, M.D., Daytona Beach; Homer L. Pearson, Jr., M.D. Miami; and Melvin M. Simmons, M.D., Chairman, Sarasota.

As authorized by the Legislature in 1959, one scholarship was awarded for the study of osteopathic medicine. The recipient was recommended by the State Board of Osteopathic Medical Examiners.

Scholarships for the study of dentistry were awarded by the Board upon the recommendations of the State Board of Dental Examiners.

Scholarships in the several disciplines of mental health were awarded by the Board upon the recommendations of the Florida Council on Training and Research in Mental Health.

Through the Federal Social Security Act of 1935, the SBH receives federal funds which are used to provide stipends to its employees and those in affiliated CHDs for specialized professional training. These stipends are awarded to career employees who evidence a potential for growth and service in specialized areas of public health.

MEDICAL

Scholarships Awarded in 1963:

Kenneth L. Beckett	Jacksonville	Ronica Mahoney	St. Petersburg
Calvin Collins, Jr.	Sanford	Kluge	Key Biscayne
Beatrice Alfreda		Bodo Eitel Pyko*	Martin
Denefield	Jacksonville	Kathleen Mary Santi	Pierce
Vincent Lamar Freer	Ft. Pierce	Shirley Rose Simpson	Tallahassee
Karl George Gerlach	Miami	Ira Harmon Wenzel	Lakeland
Samuel Boykin Hunter	Hawthorne	Phillip Eugene Wright	

Continuing Scholarships Awarded Prior to 1963:

Awarded 1960:	Awarded 1961:	Awarded 1962:
Sylvester Barrington	Jack Denby Bergstresser*	Richard Julian Bagby
Rodney Lee Brimhall	George Duncan Finlay	Leonard Channing Bass
John Augustine Moore	Buford Gibson, Jr.	Lloyd Dale Gauvin*
Cupid R. Poe	Ronald Loyde Haney	Joseph William Haddock
Frederick Oliver Smith	Oliver Hunt Harper	Donald Gammon Hall
Paul Vincent Sullivan	Braxton William Price	Gordon David Onstad
Tommie Lynn Thomas*	Joseph Thomas	Laurie Miles Pardee
Robert Wheelchel Miles	Rabban, Jr.	Richard Allison Pollock
	David Oliver Westmark	Richard Thomas
	Hubert Warren Wingate	Roby, Jr.
		Howard Todd Willson

*Studying osteopathic medicine.

DENTAL

Scholarships Awarded in 1963:

John F. Bemby	Palatka	Anthony B. Frilingos	Coral Gables
Norman M. Bevan, Jr.	Largo	George D. Sanchez	Tampa
Frederick A. Booth, III	Miami	Michael R. Kennedy	St. Petersburg
Robert L. Ferdinand	Miami		

Continuing Scholarships Awarded Prior to 1963:

Awarded 1960:	Awarded 1961:	Awarded 1962:
Teddy Wallace Brown	Clement W. Barfield	George Wallace
Emmett Alfred Kirksey	George B. Dorris	Boring, Jr.
Charles H. Ritter	Guy Ronald Estes	Robert Renne Burch
Allen R. Treadwell	John T. Griffin, Jr.	James V. Ferdinand
	Charles A. Harrell	Ronald Emil Molinari
	Arthur R. Higgs	William Walker
	Edward L. Peters	Motley, Jr.
	Ivan Beryl Roberts	Alvan Carlton Smith
	David M. Strimer	Gordan Dennis Wiebe*
	William R. Warrender	John Paroy Youngman
		Emory Turner Cain

*Scholarship surrendered in November 1963.

MENTAL HEALTH

Clinical Psychology

Richard B. Bracewell	Jacksonville	Kemper McCue	Miami
Charles E. Buchanan	Gainesville	Dorothy Ward	Winter Park
Mack R. Hicks	Gainesville	John F. White	Tallahassee

Psychiatric Nursing

Josephine L. HuntWinter Haven Jo Ann McKayGainesville

Psychiatric Social Work

First Year

Charlotte BarbourPalm Beach
 David C. BatesTampa
 George K. BondMiami
 Elizabeth F. BuckinghamFt. Lauderdale
 Danny W. EdwardsTallahassee
 Sara FrenchTallahassee
 Loren H. HildebrandLive Oak
 Laura K. LevineTallahassee
 Nancy Lee ParhamGreen Cove Springs
 Winifred K. RasmussenMaitland
 Frances RowlandIndian Rocks Beach
 William J. SimmonsPlant City
 Thomas J. Stewart, Jr.Lake City
 James E. WetmoreTallahassee

Second Year

Raymond L. EdwardsTallahassee
 Herbert W. UppittMiami

Public Health Personnel

H. V. Gayles.....Public Health Nurse II.....Sarasota
 R. W. Gillespie.....Sanitarian II.....Hillsborough
 R. L. Hebblethwaite.....Chemist II.....State Board of Health
 G. W. Hoover.....Health Officer II.....State Board of Health
 M. M. Lentz.....Public Health Nurse III.....Broward
 D. V. Logsdon.....Resident Trainee.....Palm Beach
 P. A. Maher.....Public Health Nurse II.....Palm Beach
 R. L. Maston.....Sanitarian I.....Duval
 L. P. Robinson.....Sanitary Engineer II.....Pinellas
 R. F. Schneider.....Biologist II.....State Board of Health
 H. E. Skipwith.....Nutritionist I.....State Board of Health
 M. H. Speakman.....Public Health Nurse II.....Highlands
 S. Van Ooteghem.....Public Health Nurse II.....Hillsborough
 A. J. E. Wilson III.....Asst. Social Scientist.....Pinellas
 L. L. Wood.....Public Health Nurse III.....Pinellas
 G. R. Wyman.....Public Health Nurse I.....Alachua

ENCEPHALITIS RESEARCH CENTER

JAMES O. BOND, M.D., M.P.H.

Initiated as a temporary field station during the 1962 epidemic of St. Louis Encephalitis (SLE), the Tampa Bay Regional Encephalitis Laboratory assumed more permanent status on December 1, 1962, following the award of a five-year grant from the National Institutes of Health (NIH) to the State Board of Health (SBH). The laboratory was established in a building provided by the Southwest Florida Tuberculosis Hospital on its grounds in Tampa. Later in 1963, the \$186,000 NIH Grant was supplemented by \$100,000 appropriated by the Florida State Legislature for research, surveillance and control of encephalitis.

A portion of the state money was allocated to the Tampa laboratory which was then officially named the Encephalitis Research Center (ERC).

The Center has a staff of 24, and the director is immediately responsible to the State Health Officer. The activities of the center are coordinated with other statewide research and surveillance activities in encephalitis by the Coordinator of Research. The various scientific disciplines in the ERC maintain close consulting relationships with their appropriate bureaus in the SBH. The Research Center maintains close cooperative relationships with the county health departments (CHD) and the County Mosquito Control Districts in Hillsborough, Manatee, Pinellas and Sarasota Counties. The Arbovirus Laboratories of the Communicable Disease Center (CDC), of the U.S. Public Health Service (USPHS) in Atlanta, Georgia, and the University of Pittsburgh Graduate School of Public Health are utilized for special reference and consultive assistance.

A nine-member Encephalitis Advisory Committee of nationwide experts was appointed to advise the State Health Officer on statewide research, surveillance and control activities, including those carried out in the ERC. The committee was composed of W. McD. Hammon, M.D., University of Pittsburgh; John P. Fox, M.D., Public Health Research Institute of the City of New York, Inc.; Oscar Sussman, D.V.M., State Department of Health, New Jersey; George T. Carmichael, Chatham County Mosquito Control District, Savannah, Georgia; Joel Ehrenkranz, M.D., University of Miami School of Medicine, Miami; Carroll N. Smith, Ph.D., U. S. Department of Agriculture Research Branch, Gainesville; Carlton M. Herman, Ph.D., U.S. Fish and Wildlife Service, Laurel, Maryland; Telford Work, M.D., CDC, USPHS, Atlanta, Georgia, and Archie Hess, Ph.D., USPHS Greely, Colorado.

The scientific activities of the ERC in 1963, although planned as a team effort, will be presented as a report from each section.

The establishment and maintenance of a surveillance and reporting system for all central nervous system viral diseases in the Tampa Bay area resulted in a high index of suspicion among medical and public health personnel. Of 301 suspected viral infections of the central nervous system in humans brought to the attention of the ERC, 82 were finally appraised as representing cases of infectious encephalitis, aseptic meningitis or paralytic disease. There were no acute cases of SLE with laboratory confirmation in the four-county area during 1963, although one was reported on the basis of clinical findings. One California virus infection was confirmed, the second reported occurrence of encephalitis following infection with this virus in the United States. Of the remaining cases in which a definite etiology was established, two were from measles; 13 from mumps; four, influenza; two, poliomyelitis; and one, leptospirosis. In 64 per cent of the 82 cases, no etiological relationships could be established.

Three major serologic surveys for inapparent SLE infection were carried out or completed during 1963. These involved 3000 individuals

from Bradenton, Sarasota, Clearwater, Tampa and rural Hillsborough County. Prevalence rates for preceding inapparent infection with SLE in these areas were as follows: Clearwater 8.1 per cent, Tampa 4.1 per cent, Bradenton-Sarasota 3.4 per cent. A small group of the Hillsborough County residents were rebled in December 1963 and there was no evidence in their sera that any transmission of SLE virus to humans occurred during the summer months. Small samples of the 3000 survey individuals were also examined for prevalence of antibodies against California and Tensaw viruses. It was found that one to six per cent of these had previous infection with California virus and from one to five per cent with the Tensaw virus. There was no evidence of inapparent infection with either of these viruses during the summer period of 1963.

Studies on antibody response following acute clinical SLE were carried out on selected patients from the 1959-1961 and 1962 epidemics. Although not complete, early findings from these studies indicate that the complement fixation (CF) antibodies are of very short duration, usually persisting only a few months. The Hemagglutination inhibition (HAI) antibodies fell to very low levels within the first two years and were below detectable levels at the end of the third year. Serum neutralizing antibodies, on the other hand, have been shown to persist for the full three years of the follow-up studies.

The Entomological Section maintained chick baited traps on a semiweekly operation at 12 stations from January to April, and at 28 stations from May to December 1. Six of these, (three in mosquito control areas), are key stations where temperature recorders and rain gauges are operated and are adjacent to six truck trap runs. As of December 31, 72,746 mosquitoes were captured by bait traps and submitted in 2592 pools for virologic testing. From eight pools of *Aedes infirmatus* mosquitoes, isolations were made of a viral agent later identified as closely related to the Trivittatus virus which is a member of the California group. A ninth isolation, from *Aedes taeniorhynchus* mosquitoes, was identified as Tensaw virus, a member of the Bunyamwera group. The California group viruses were isolated from mosquitoes trapped in Pinellas, Hillsborough and Manatee Counties, and the Tensaw virus was obtained from Hillsborough County. In 890 pools prepared from 47,093 *Culex nigripalpus* mosquitoes collected in bait traps, no viral isolations were made.

Truck trap collections were used to establish the densities of various mosquito species in the controlled and uncontrolled areas, and to determine the percentage of gravid and parous (fertile) female mosquitoes of the sub genus *Culex*. A total of 61,759 mosquitoes were collected in the truck traps, of which 13,725 were in controlled areas and 48,034 in uncontrolled areas. The pattern of consistently lower numbers of mosquitoes collected by the truck traps in controlled areas was found in each of the three counties. In Hillsborough and Pinellas Counties, the percentages of parous or gravid female mosquitoes were consistently and significantly lower in the controlled compared to the uncontrolled.

Meteorological observations on temperatures and rainfall were compared to the mosquito densities in each of the collection sites. *Culex*

nigripalpus densities were unusually low in all three counties and were particularly low in Pinellas County where intensive adulticide efforts were carried out from early spring through late October. In all three counties there were small amounts of rainfall in the spring and early summer, and this combined with the low water table made conditions particularly unfavorable for early *nigripalpus* development. Late in the fall there was a rise in *nigripalpus* density, but apparently too late for any significant effect on SLE transmission.

Virus activity in vertebrates was measured by serological and virological examinations of sentinel chickens, nestling wild birds, trapped wild mammals, and sick birds and mammals collected from the epidemic area. During the period March through November, 794 sentinel chickens were exposed in standardized traps during 10 separate three-week periods. Sixteen of these chickens had low titers of HAI antibodies against SLE, and all were negative against Eastern Encephalitis (EE). The significance of these low HAI titers cannot be assessed until neutralization antibody studies are performed on these sera. It is presumed, however, that they likely represent nonspecific inhibitors in the sera rather than the SLE antibodies. Three of 376 nestling rookery species had low SLE-HAI antibody titers, and three of 390 urban nestling species had similar titers. All three of these were from 333 nestling doves collected in the epidemic area of St. Petersburg. Two of 42 marsh and shore bird nestlings, and one of 324 small mammals also exhibited low SLE-HAI antibody titers. Of the titers observed, only one, a titer of 1:160 in a nestling redwing blackbird, was considered to be of definite significance, representing recent infection with SLE.

Laboratory infection experiments carried out with four-day and four-week old chickens indicated that viremia and high antibody titers are rare in older chickens, but relatively common in the young. Similar infection experiments with doves indicated that they respond with higher antibody levels and a greater proportion have prolonged viremias, compared to chickens.

Special ornithological observations were carried out by Dr. Glen Woolfenden of the University of South Florida with the assistance of graduate students. The avian populations in selected areas in the three counties were measured using both a strip census and a nesting census technique. Using the former technique, the densities of total birds per census mile were found to vary from 160 in Tampa to 189 in St. Petersburg. A total of 74 species were recorded in all, but 90 per cent or more of the individuals could be accounted for by only 12 species. There were significant differences in the relative densities of these 12 species in the four study areas. Comparative observations for time of year, technique and area were made in both St. Petersburg and Tampa in 1962 and 1963. Remarkably little variation was found in the relative density of birds during the two periods of time. A special area census of nesting birds was carried out during the spring and summer of 1963 in three plots in St. Petersburg. The housesparrow was most frequently encountered, followed by the mourning dove. A close association was found between the density of mourning doves and the type of vegetation. High densities were found in pine plot areas, smaller densities

in oak plots and very low densities in plots in which there was less than one per cent standing vegetation coverage.

Following a period of renovation of space and training of personnel, the virology laboratory began functioning on a routine basis in April 1963. Through December, 2592 pools of mosquitoes have been processed for virological specimens in suckling mice, and 5331 serum specimens examined for the presence of antibody against various arboviral agents. In all, nine viral isolations were obtained as previously described. Following a third suckling mouse passage, these viral agents were shown by the ERC virology laboratory to be neither EE, SLE, or Western encephalitis virus by the complement fixation and neutralization screening tests. None of the isolates produced a hemagglutinin and all were shown sensitive to sodium desoxycholate. They were then forwarded to the University of Pittsburgh or the CDC virological laboratories for final identification. Eight of the isolates were demonstrated to belong to the California group by cross-neutralization, CF and HAI tests. They are most closely related to the Trivittatus agent, first isolated in North Dakota in 1948. The ninth agent was shown to belong to the Bunyamwera group by the ERC virology laboratory and confirmed at both CDC and the University of Pittsburgh. Other cooperative and comparative serological studies were carried out with CDC and the University of Pittsburgh to determine the sensitivity and specificity of the different arbovirus antigens used in the ERC battery.

In cooperation with the virology section of the SBH laboratories in Jacksonville, additional virological diagnostic studies were carried out on human specimens from the four-county area in which there was no evidence of arbovirus activity. Of 133 stool specimens tested in Jacksonville, nine enteroviruses isolations were made. Two of these were poliomyelitis, and the remainder were Echo-6 and Echo-7. Attempts to isolate virus from 55 cerebrospinal fluids were made; all were negative. In addition, serological examinations were performed for mumps in 45 individuals, 13 cases were confirmed; leptospirosis, 73 examined, one case confirmed; LCM, 36 examined, none confirmed; poliomyelitis, 47 examined, two confirmed; herpes simplex, 16 examined, none confirmed; and measles, two examined none confirmed.

Five students received training experience in the ERC during 1963. Two were undergraduates in the field of biology and laboratory technology, and three were graduate students, one each from medicine, entomology and biometry. A public health veterinarian and a public health physician also spent some time in residence at the Center for training experience in arbovirus epidemiology.

DIVISION OF HEALTH EDUCATION

ELIZABETH REED, R.N., B.S.
Director

The function of this division is to provide accurate knowledge about health to the various publics in a manner which they can understand

and accept and to motivate them to make full use of this information. The division does not have a "program" but rather is a service activity that seeks to assist other bureaus and divisions in extending the health education aspects of their programs. To this end close contact is maintained with them, county health departments (CHD) and with many official and lay health organizations, schools and civic organizations.

The *Audio-Visual Library* must constantly revise procedures in order to cope with the increase in circulation. A revised booking order form was placed in use eliminating several steps in typing and filing. Part-time employees had to be employed on three occasions to meet the heavy work load. The following figures give comparable evidence of activity:

	1962	1963
Total number of aids circulated	6,357	7,394
Total number of times all aids were used	11,660	15,136
Motion pictures used	5,892	7,007

Part of the reason for this increase was the large number of films (181 prints) purchased with categorical funds at the end of the fiscal year, as well as the 16 bought with division funds and 27 placed in the library on loan from other agencies. Categorical funds also accounted for the acquisition of some new equipment including a second electronic inspection and processing machine, projectors, film racks, etc.

The results of a survey conducted among state health departments was compiled and distributed. It revealed the policies and procedures of the various states in the handling of audio-visual aids, and, therefore, was of assistance in review of this library's functions.

A major problem is the difficulty encountered in trying to get key personnel to review and evaluate new aids which are offered for purchase; the lack of a balanced collection because categorical funds allow purchases only in specific subject areas, and the need for the promotion of use of certain excellent aids in the library on cancer, heart disease, rehabilitation, etc.

Florida Health Notes' mailing list continues to grow (presently over 18,000). Subjects covered in 1963 included sanitation in suburban areas, venereal diseases, safety, hospitalization services for the indigent, health laws, voluntary health agencies, aging, household pests, food poisoning and a simplified annual report. . . . Other *writing* responsibilities included the editing and publishing of State Board of Health (SBH) monographs numbers 4 and 5, *Epidemic Enteric Infections among Prisoners of War in Korea* and *Tampa Bay Area Arbovirus Investigations*, the *Annual Report* and numerous pamphlets and brochures. . . . Twenty-eight television spot announcements were prepared. An informal survey showed that most stations used them about four times a week. Approximately 25 spots were supplied to radio stations throughout Florida. Four issues of the *Intelligencer* were issued (births, deaths, honors, etc., of employees of SBH, CHDs and voluntary health agencies); 51 issues of the weekly announcement "Conferences and Meetings"; two flipcharts were prepared — one on general public and one on activities

of the Bureau of Laboratories; and six postage meter ads were designed. . . . This division also does all photography for the SBH, except that which is used for publicity purposes. . . . A small brochure was issued entitled "We Lend" showing the location and availability of all the audio-visual equipment in the SBH, including cameras, projectors and specialized equipment. These are loaned to SBH personnel as the need arises.

Nutrition, chronic and communicable diseases were the three most popular categories in 325,000 *pamphlets* distributed this past year. This was an increase of over 80,000 over 1962 despite the fact that quantities are sharply limited. Spanish language pamphlets continue to grow in popularity.

The work of the *exhibits* consultant increased by 10 per cent over the previous year. Fairs and medical meetings required the setting up of various types of displays, but the tremendous cost of those which will effectively compete with commercial exhibitors somewhat limits participation. The consultant is spending more time in the preparation of material for slides, charts, graphs, posters and the like as the SBH staff realizes the potentialities of these aids.

The *Medical Library's* book collection grew and the collection now totals 19,590. Books were purchased on dentistry, veterinary public health, nursing and radiological and occupational health. The psychiatric nursing collection is probably the largest in Florida. Categorical funds purchased many books on aging and maternal and child health which were distributed to the CHDs. In 1963, 2330 books were checked out, 12,749 journals circulated, 62 interlibrary loans requested from other libraries, 1410 photocopies made, 2459 reference questions answered and 18 bibliographies prepared. SBH personnel forms the largest group served followed by CHD personnel, local physicians, dentists, nursing students and a few college and high school students. Liaison is maintained with the Jacksonville Hospital Educational Program and 115 loans were made to their six cooperating hospital libraries.

The librarian completed the requirements (at Emory University) for Certified Medical Librarian. . . . The library is an institutional member of the Medical Library Association which enables it to dispose of duplicate journals and request those to fill its needs. At the last "exchange" 1541 journals were sent to other libraries. . . . A much needed new card catalog was purchased.

Other activities of the staff included four Orientation Programs with an attendance of 171. . . . Worked with the Glades and Hendry CHDs in setting up a gun safety program for Seminole Indians (as a preface to an educational program on sanitation). . . . Staff attended many meetings with educational and PTA groups. . . . Assisted, by working with teacher groups, with the implementation of the new *Dental Health Bulletin*. . . . Worked with a Rural Development Committee in stimulating the formation of a Community Health Council.

Major emphasis was given to cooperation with the following programs during 1963: accident prevention, tuberculosis, maternal and

child health (Teachers Project in Health Education), mental health, training, chronic diseases, venereal diseases, Encephalitis Research Center. The director served on numerous inter-departmental committees including summer students, orientation program, publicity, monographs. . . . Made many talks to such groups as classes at universities, Gulf Coast Health Conference, student practical nurses. . . . Supervised three summer student employees.

A constant activity was the recruitment of and consultation to all health educators employed by the SBH and CHDs. The annual meeting of this group was held in Jacksonville. A major problem is the inability to recruit health educators at the present low salary levels.

Interesting projects in 1963 were those conducted in Escambia and Santa Rosa Counties for getting out the adult population for X-ray surveys; and the beginning of an ambitious program in Franklin County to work to improve the home sanitation conditions of oyster workers.

A continuing objective is the employment of an assistant director, and regional health educators to serve the Tallahassee and Gainesville areas.

DIVISION OF PERSONNEL

MILES T. DEAN, M.A.
Director

Under the general direction of the State Health Officer, this division is responsible for the administration of the personnel program of the State Board of Health (SBH). This includes advising administrative officers concerning personnel practices and development; putting into effect procedures for carrying out approved personnel policies; participating in the preparation and administration of the approved Classification and Compensation Plan; administering the leave regulations; maintaining adequate personnel records on all persons employed in the agency; acting as liaison official with the Florida Merit System involving requests for certificates and reporting on the selection of eligibles, promotions, salary advancements, salary adjustments, demotions, transfers, dismissals, lay-offs and resignations; providing and administering a service rating system; and the preparing of necessary reports both state and federal. Payroll operation, also a responsibility of this division, includes the administration of leave accounting, the employee insurance program, retirement and Social Security, as well as the preparation of the administrative payroll and distribution of warrants. Preparation of the salary portion of the Legislative Requesting and the Operational Budgets is also a responsibility of the Division of Personnel.

During 1963 the number of new employments continued to be considerable. There were 776 employments during 1963.

Pay ranges for 104 classes in the SBH Classification and Pay Plan were revised upward. The Merit System returned to the regular rules for

Turnover continued to be a problem with a significant increase in the number of public health nurses leaving the employment of the SBH. Terminations during the year increased to 609.

TABLE 1
NUMBER OF EMPLOYEES IN THE FLORIDA STATE BOARD
OF HEALTH AND COUNTY HEALTH UNITS
AS OF DECEMBER 31, 1954 - 1963

Year	State Office	County Health Departments	Total Employees
1963	762	1918	2680
1962	692	1821	2513
1961	626	1593	2219
1960	604	1534	2138
1959	586	1396	1982
1958	558	1321	1879
1957	528	1234	1762
1956	481	1127	1608
1955	442	1057	1499
1954	421	980	1401

TABLE 2
DISTRIBUTION OF PERSONNEL
FLORIDA STATE BOARD OF HEALTH
(OTHER THAN COUNTY HEALTH DEPARTMENTS)
DECEMBER 31, 1963

[illegible]

TABLE 2 (Continued)
DISTRIBUTION OF PERSONNEL
FLORIDA STATE BOARD OF HEALTH
(OTHER THAN COUNTY HEALTH DEPARTMENTS)
DECEMBER 31, 1963

[illegible]

TABLE 3
DISTRIBUTION OF PERSONNEL IN COUNTY
HEALTH UNITS, FLORIDA, DECEMBER 31, 1963

COUNTY	Totals	Physicians	Public Health Dentists	Public Health Nurses	Sanitary Engineers	Sanitarians	Laboratory Wkrs. (Prof. & Tech.)	Mental Health	Other Professional and Technical	Clerical	All Others
Grand Total	1918	117	27	664	14	321	16	86	48	414	211
Alachua	38	2	1	13		5		4		8	5
Baker	3			1		1				1	
Bay	16	1		5		3		2		3	2
Bradford	6	1		2		1				1	1
Brevard	41	1		12	1	7	1	2	2	13	2
Broward	89	3	1	24	2	18		3	4	24	10
Calhoun	6			3		1				1	1
Charlotte	11	1		4		3				3	
Citrus	6	1		2		1		1		2	
Clay	8			4		1				1	1
Collier	11	1		3		1		2		3	1
Columbia	8	1		3		2				1	1
Dade	418	46	14	156	3	59	8	13	11	84	24
DeSoto	6			2		1		1		1	1
Dixie	4			2						10	5
Duval	51	2	1	15		9	1	7	1	18	8
Escambia	67	4		18		13		5		1	
Flagler	3			1		1				1	1
Franklin	5	1		7		3				2	1
Gadsden	14	1		2						1	
Gilchrist	3									1	1
Glades	1									2	
Gulf	5			2		1				1	1
Hamilton	5			2		1				2	1
Hardee	7			3		1				3	3
Hendry	11			4		1				1	
Hernando	2			1						2	
Highlands	10	1		4		2		1		32	31
Hillsborough	187	6	3	65	2	37	1	4	6	1	1
Holmes	5			2		1				2	3
Indian River	11	1		5		2		1		2	2
Jackson	14	1		5		2				1	1
Jefferson	7			2		1	1			1	1
Lafayette	3					1	1			4	2
Lake	17	1		7		3				3	
Lee	14	1		5		3		1	1	9	4
Leon	35	3		9		5		4	1	1	2
Levy	7			3		1				1	1
Liberty	3			1						2	1
Madison	6			2		1				7	3
Manatee	33	1		11		6		3	2	2	2
Marion	12	1		2		3		1	1	1	
Martin	5			2		2				6	2
Monroe	18	1		6		3				2	3
Nassau	12	1		4		2				2	3
Okaloosa	17	1		6		3			1	3	3
Okeechobee	4			1		1				1	1
Orange	75	4		24	1	12		2	5	18	9
Osceola	5			2		1				2	
Palm Beach	97	5	2	29	2	16		8	2	19	14
Pasco	8	1		3		2				2	
Pinellas	176	10	2	67	2	28	4	4	8	38	13
Polk	89	2		35	1	13		4	2	18	14
Putnam	16	1	1	5		3		1		3	2
St. Johns	10	1		4		2				2	1
St. Lucie	17	1		3		5		3		4	1
Santa Rosa	12	1		5		2				1	3
Sarasota	41		1	14		8		1		13	4
Seminole	16	1		6		3		1		3	2
Sumter	4			1		1				1	1
Suwannee	10	1		4		1				2	2
Taylor	5			2		1				1	1
Union	3			1		1				1	
Volusia	55	4	1	19		7		6		9	9
Wakulla	3			2				1		2	1
Walton	6			1		1				1	
Washington	5			2			1			1	

TABLE 4
PERSONNEL TURNOVER BY POSITION CLASSIFICATION,
FLORIDA STATE BOARD OF HEALTH AND
COUNTY HEALTH UNITS, 1963

CLASSIFICATION	TERMINATIONS	TURNOVER RATE
Physicians.....	23	16.3
Dentists.....	12	32.4
Public Health Nurses.....	118	17.2
Sanitary Engineers.....	4	8.7
Sanitarians.....	25	7.7
Laboratory Workers (Prof. and Tech.).....	15	9.3
Mental Health.....	5	5.0
Other Professional and Technical.....	17	11.0
Clerical.....	142	23.2
All Others.....	132	35.7
Total.....	493	19.0

Not including persons employed on a temporary or for a specific duration. There were 116 such terminations.

TABLE 5
EMPLOYMENT TERMINATION, FLORIDA STATE BOARD OF
HEALTH AND COUNTY HEALTH UNITS, BY SALARY
RECEIVED AT TIME OF TERMINATION, 1963

CLASSIFICATION	Total	MONTHLY SALARY									
		Up to 199	200-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000
Total.....	493	46	196	150	44	13	24	4	5	3	8
Physicians.....	23		1	1	6	2	1				
Dentists.....	12						12		2	3	7
Sanitarians.....	25			11	10	3	1				
Sanitary Engineers.....	4					1	3				
Public Health Nurses.....	118		7	93	17	1					
Lab. Workers (prof. and tech.).....	15	1	6	4	3			1			
Mental Health.....	5						3		1		1
Other professional and technical.....	17		1	1	6	5	2	1	1		
Clerical.....	142	2	118	22							
All Others.....	132	43	63	18	2	1	2	2	1		

DIVISION OF PUBLIC HEALTH NURSING

RUTH E. METTINGER, R.N.
 Director

ENID MATHISON, R.N., M.P.H.
 Acting Director

For the past year, the division has functioned as a separate section reporting directly to the State Health Officer. It works with all other bureaus and divisions to coordinate programs which use nursing services in the development and maintenance of their public health programs.

Guidance and assistance is given to public health nurses in county health departments (CHD).

Five generalized nursing consultants serve districts of approximately 13 counties each. Their function is to study nursing administrative and supervisory problems in the counties, and to observe, plan, counsel and suggest ways in which programs might function more effectively. In smaller counties where there is no supervising nurse the supervisory process may be combined with consultation. A total of 193 visits were made to the 67 counties by the generalized consultants.

The division continues to put emphasis on the initiation and expansion of home nursing care problems. This service is now available to approximately 80 per cent of the population in the state. Subsequent to the inclusion of this service in the Medical Assistant to the Aged Program, plans were made to do detailed time and cost studies for validation of the cost of these nursing care visits.

The Field Training Center for public health nurses in Clay County continues to give a two-weeks orientation for nurses from counties initiating a home nursing care service. Ten nurses had this experience in 1963. Five newly employed public health nurses also attended an eight-weeks orientation program at this center.

Eleven nurses attended Rusk Institute and Kenny Institute for the three-weeks course in rehabilitation nursing. This is a most valuable experience for public health nurses as chronic disease patients are cared for in increasingly large numbers.

A consultant who recently earned a Master's degree in Rehabilitation Nursing has been added to the staff of the division. She will work with public health nurses and nursing home personnel in evaluating the nursing rehabilitation needs of patients, stimulate the availability of services and facilities where none exist and assist in the training of personnel in techniques and skills needed in rehabilitation nursing.

For the first time since midwives have been licensed by the State Board of Health, their number fell to 200. Twelve counties do not have a midwife. As a result of cooperation between the Seminole CHD and the Marie Francis Maternity Home in Sanford, a three-weeks observation and study experience was made available to midwife trainees. This experience included maternal and child health clinics, field visits to antepartum and postpartum patients and delivery room observations and instruction. Even though the percentage of midwife deliveries (to the total number of births) has decreased markedly, the actual number has changed very little.

The nursing consultant in the mental retardation program of the Bureau of Maternal and Child Health continues to provide information to professional workers and the public on the care and training of mentally retarded persons, as well as the public health aspects of prevention.

BUREAU OF DENTAL HEALTH

FLOYD H. DeCAMP, D.D.S.
Director

A comprehensive evaluation and comparison of the progress of this bureau's program in 1963 gives proof that this year has been outstanding. Added interest and cooperation has been shown by Florida dentists, the State Department of Education (SDE), the teaching profession, the general public, and most of all, the medical directors of all county health departments (CHD).

The highlight of this closer association was the completion and introduction into the county schools of a guide, DESIGN FOR TEACHING DENTAL HEALTH IN FLORIDA SCHOOLS, (Bulletin 7). This was sponsored jointly by the SDE, the State Dental Society and the State Board of Health (SBH). These three agencies jointly assumed responsibility of the cost of printing the first 18,000 copies — a sufficient number to allow one copy for every five teachers in the state. This teaching guide has done more to aid the education program of the bureau than any other event in its existence.

DENTAL PRECEPTORSHIP PROGRAM

As a means of enabling CHDs to staff their dental clinics, this program was established in 1957. Many excellent young dentists from out of state have elected to remain and establish their own private practice when their tour of duty is completed.

Preceptorship dentists are selected by the State Board of Dental Examiners and their work is supervised by a local committee of dentists, an advisor from this bureau and the directors of CHDs in their respective areas. Preceptorship contracts are for one year but may be extended an additional year when circumstances warrant. . . . A five-day postgraduate course was sponsored by the bureau.

A total of 19 counties received dental services from these preceptorships for all or a portion of 1963. These were Alachua, Broward, Duval, Flagler, Glades, Hendry, Highlands, Hillsborough, Lake, Manatee, Marion, Orange, Palm Beach, Polk, Putnam, Sarasota, St. Johns, Santa Rosa and Volusia.

DENTAL SCHOLARSHIP PROGRAM

Recipients of scholarships (see Coordinator of Training elsewhere in this Report) may receive up to \$1000 a year for as many as four years. The Dental Scholarship Law, as amended in 1961, requires scholarship graduates to practice in an "area of need" (where there are few or no dentists) for 12 months for each \$1000 received. Under certain circumstances, students may repay the funds received. Since 1955 there have been 91 scholarships awarded, with two cancellations before becoming effective.

DISPOSITION OF THE 53 GRADUATES TO DATE:

Serving in "areas of need"	27
Repaid scholarship in full	8
Completed compensatory practice	2
In military service	9
Repaying scholarship	6
Unable to qualify for Florida licensure	1
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DENTAL CLINICS

Those counties served by a full-time, licensed public health dentist during all or a portion of the year were Broward, Dade, Liberty, Marion, Orange, Palm Beach, St. Johns and Volusia. The Jacksonville City Health Department also employed a licensed dentist a portion of the year.

Two mobile dental clinics are maintained to serve underprivileged elementary school children in areas having few or no practicing dentists. Both clinics are fully equipped. Supervision of these dentists is furnished by this bureau, the preceptorship committees and the county health officers in the counties or areas to which the clinics are assigned.

During 1963, one clinic operated 12 months while the other operated four months on half-time and four months on a full-time basis. A summary of services performed follows:

School dental inspections	564
New patients	1356
Repeat patients	1012
Prophylaxes	242
Fillings (all types)	4311
Extractions	997
Miscellaneous treatments	391
Talks given to school and civic groups	24
Pamphlets distributed	498

Due to an increase in interest of the individual counties to improve their dental health programs, Orange CHD employed a full-time dental hygienist.

During the year, the SBH dental hygienist conducted many dental inspection surveys in both white and Negro schools as well as gave lectures and classroom demonstrations on proper tooth brushing techniques and home care.

New dental clinics began operating this year in Flagler and Liberty CHDs. The Polk CHD increased its dental facilities with the opening of a clinic at the Frostproof Health Center. The new CHD building erected in Marion County in 1963 included a dental clinic which replaces a clinic formerly maintained in the local hospital.

The interest and support of civic and professional groups continued to play a strong role in local public health dental programs. In many instances substantial gifts of money, equipment, materials and volunteer assistance were given by these groups to sustain the operation of dental

clinics. Numerous requests for information concerning the establishment of dental clinics were received from interested counties.

FLUORIDATION

In 1963, Fort Pierce joined 23 other Florida cities in providing a fluoridated water supply. Other cities now fluoridating water supplies are Gainesville, Clewiston, Naples, Cocoa, Orlando, Ocala, Ormond Beach, Leesburg, Belle Glade and Miami. An additional 13 suburban areas use fluoridated water from the mains of Miami and Belle Glade. Key West and other cities in Monroe County are supplied fluoridated water by the U.S. Navy.

Jacksonville, Sarasota and 25 other communities are served by water systems having approximately the correct amount of fluoride as a natural component. Approximately 319,490 people are served in these cities and another 745,094 are served in those cities having controlled fluoridation. In all, areas having a combined population of 1,064,584 are receiving the benefits of water fluoridated at near optimal level.

Throughout the year, the bureau has continued to receive an ever-increasing number of requests for information regarding fluoridation. Staff members of the bureau assisted with local efforts to obtain fluoridation in West Palm Beach, Pensacola, DeLand, North Miami Beach and St. Cloud. The city commissions of West Palm Beach and Pensacola passed ordinances favoring fluoridation.

HEALTH EDUCATION

The health educator participated in scores of faculty, health coordinator and nurses meetings; the Health Project in Teacher Education, state conventions, county lunchroom worker workshops and state agricultural extension programs such as 4-H Short Course at the Florida State University. Over 54,000 pamphlets were distributed.

The establishment of three new dental schools of oral hygiene in the state has given new impetus to the dental program. These schools are located at the junior colleges at St. Petersburg, Pensacola and Lake Worth.

LACTOBACILLI LABORATORY PROGRAM

The Bureau of Laboratories and this bureau in 1963 continued to improve the service of the lactobacilli program. Though the number of dentists using the program and saliva submitted to the laboratory did not increase, the dentists using the program over a period of time have continued to utilize the service on a broader scale.

J. A. MULRENNAN, B.S.A.
Director

This has been a year in which to assess the reasons for the 1962 St. Louis Encephalitis (SLE) epidemic in the Tampa Bay area.

The 12 light traps which have been operated for around 15 years in Pinellas, Hillsborough, Manatee and Sarasota Counties showed a tremendous drop in *Culex* (*Culex*) spp. breeding during 1963. The light trap average *Culex* mosquito count for the year was 4.96, as compared to an average count of 36.78 for 1962, the epidemic year.

The one thing which appears to be very significant is that the *Culex* density for this section reached its highest peak in 1959, with an average of 37.41 mosquitoes. This was the first year that SLE was observed in the human population. The density of *Culex* mosquitoes remained high through 1962, but was followed by the sudden drop of *Culex* mosquitoes during the 1963 season.

There appears at this time to be sufficient information available to theorize as to why the heavy production of *Culex* mosquitoes occurred during this four-year period. It is a known fact that there was a tremendous amount of rainfall in 1959 when highways and homes were flooded with water. The St. Petersburg rainfall station recorded 87.62 inches of rainfall for that year. Apparently the water table in this area remained reasonably high through 1962. The ground water table was sufficiently high so that 10.23 inches of rainfall in June 1962, produced ideal conditions for heavy production of the vector, *Culex nigripalpus*. This species, it is believed, had built up in this area due to reasonably warm winters and the perfect breeding conditions which existed until the freeze in December 1962.

In the spring and early summer of 1963 it was apparent that the ground water table was low, requiring considerable rainfall to produce optimum breeding conditions; and, that it would be late in the year before the density could build up to a dangerous level. Actually, the rainfall for the entire year was 4.5 inches greater in 1963 (62.54 inches) in this area than in 1962 (58.01 inches), but the *Culex* population never did build up to a level comparable to previous years.

Based on observations of the past, when there are warm winters with a high water table, followed by considerable late spring and early summer rainfall, conditions are ideal for the heavy production of *C. nigripalpus* mosquitoes. If, in addition, SLE virus is circulating in a high bird population (especially mourning doves), these conditions can lead to an epidemic explosion of SLE in a susceptible human population.

During the 1962 epidemic it was believed that the large mourning dove population in this general area, and most especially in Pinellas County, was the main species of bird involved in carrying the virus. Subsequent work has confirmed this theory. In 1962 around 30 per cent of the mourning dove population tested showed evidence of having had SLE. In 1963 inoculations with SLE have demonstrated that the mourning dove is a good carrier of the virus, and will circulate the virus for

around three days. It is a known fact that this species nests in the spring and throughout the summer months, making this bird an excellent carrier and spreader of the virus when there is a large *C. nigripalpus* population to carry the virus from bird to bird and to man.

This would indicate that the heavy concentration of temporary control work should be carried out in the spring and early summer, when the greatest number of bird species is nesting, and there is a reasonably high mosquito population.

For 1964 it is planned, in addition to operating mosquito light traps, to operate two bird-baited traps each week from early March until December in each mosquito control district. One trap will be operated in a swamp and the second trap in a populated area to determine the densities of the different species of mosquitoes during the breeding season in the respective areas.

The 1963 State Legislature appropriated \$65,000 to construct and operate a dog fly laboratory in West Florida. The State Board of Health (SBH) approved the location of the laboratory in Bay County, and it is expected that construction will start in the early summer of 1964.

ARTHROPOD CONTROL

Source Reduction Accomplishments

The state fund matching rate for source reduction operations had dropped from 28 per cent at the beginning of the year to 20 per cent at the end of the year. The reduction in this matching rate each year is having a marked effect on the amount of source reduction work being performed.

In 1962 there were four 10-inch hydraulic dredges in operation. There are now only two; one in Brevard County and one in Indian River County. The latter county has reduced operations from a two-shift per day to a one-shift, thus cutting costs and production approximately in half.

The number of miles of new ditches dug by dragline has also decreased substantially, although the job is far from being completed. Maintenance of old ditches is requiring considerably more machine time each year, and insufficient funds in many counties prevent purchasing additional equipment to keep pace with drainage needs.

The number of landfills continues to increase. In a number of counties this program now requires the continual use of a dragline. These machines were previously doing machine ditching for mosquito control—another reason for the decline in the miles of new ditches dug or maintained.

Dixie County withdrew from the state program in the early part of 1963, after qualifying to begin participation on October 1, 1962.

Volusia County discontinued, as of October 1, 1963, to operate a sanitary landfill. This operation was taken over by the county commissioners and relocated in a remote site of the county.

There follows a tabulation of the source reduction work accomplished during 1963 in 54 counties (58 programs) participating in the state aid program. Unit cost figures are for labor only.

	1962	1963
Machine Ditching		
Number of counties participating	33	32
Miles ditches dug or maintained	518	466.43
Cubic yards earth excavated	4,232,046	3,856,172
Average labor cost per cubic yards	\$0.088	\$0.094
Machine Diking		
Number of counties participating	5	5
Miles ditches constructed or rebuilt	71.5	51.86
Cubic yards earth excavated	893,993	773,442
Average labor cost per cubic yards	\$0.076	\$0.070
Hydraulic Dredging		
Number of counties participating	3	2
Number of dredges used	4	2
Cubic yards earth fill placed	747,200	523,073
Average labor cost per cubic yard	\$0.140	\$0.108
Number acres mosquito breeding area eliminated ..	95	?
Deepening and Filling (Draglines and Bulldozers)		
Number of acres improved	98	67
Average labor cost per acre	\$73	\$192.85
Cisterns, Cesspools and Wells Filled		
Number of counties participating	1	0
Number cubic yards fill material required	419	0
Number of cisterns, etc., filled	64	0
Average cost per cistern (labor and fill)	\$44.22	0
Sanitary Landfills		
Number counties participating	35	34
Number landfill sites operated	73	92
Cubic yards garbage buried	4,909,266	5,248,533
Average labor cost per cubic yard	\$0.063	\$0.069

Temporary Control Measures

Competitive bidding between the manufacturers of Malathion and Dibrom resulted in the state and counties being able to purchase Malathion 37.5 per cent cheaper than in the previous year. The annual saving in cost of insecticides for fogging amounted to many thousands of dollars.

During 1963, the Entomological Research Center released recommendations for use of a third insecticide — Baytex — which will be satisfactory for use in fogging. This material is expected to be made available in 1964.

The use of airplanes by counties for adulticiding (killing adult mosquitoes) increased considerably. Monroe County purchased two twin-motored Beechcraft; Lee County added another DC-3 and one twin-motor Beechcraft. Citrus, Brevard and Volusia Counties also own planes, and at least four counties contract for airplane adulticiding.

The Northeast Duval County Mosquito Control District began operations on July 1, 1963, with temporary facilities and two fogging

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trucks. The following is a summary of the temporary control work performed in controlling mosquitoes.

	1962	1963
Ground Equipment		
Miles fogged with ground equipment	382,859	377,516
Gallons insecticidal formulation used	2,373,711	2,568,889
Labor cost per mile fogged	\$0.513	\$0.537
Airplane Equipment		
Gallons of insecticide applied (fogging)	122,445	84,905
Acres treated	1,222,956	881,321
Labor cost per acre	\$0.009	\$0.0117
Gallons of insecticide applied (spraying)	128,003	185,757
Acres treated	262,956	301,421
Labor cost per acre	0.117	\$0.134
Pounds of Paris green pellets applied (larviciding)	292,600	149,286
Acres treated	14,821	9,523
Labor cost per acre	\$0.778	\$0.413

Dog Fly Control

The dog fly control program continued in its normal routine pattern in West Florida counties. Some field investigation work was done by employees of the Department of Agriculture in an effort to learn more about the extent of fly breeding areas.

The following is a summary of the dog fly control work performed in the eight most western Florida counties which border on the Gulf of Mexico:

	1962	1963
Miles of shoreline treated	3,301	1,284
Gallons of 35% DDT concentrate used	15,705	8,456
Average labor cost per mile	\$3.70	\$6.71
Number man hours labor required	9,285	6,308

Counties Participating and Local Fund Budgets

The following counties participated in the State Arthropod Control Program during the year. Based on the fiscal year of the counties (October 1 to September 30) and as of December 31, 1963, the total amounts of local funds shown in the certified budgets to be expended for arthropod control activities are as follows:

Alachua	\$ 42,652.00	Gulf	36,500.00
Bay	81,413.00	Hardee	4,700.00
Bay (Gulf Beaches)	38,050.77	Hernando	4,262.87
Bradford	10,924.49	Highlands	3,747.42
Brevard	310,514.53	Hillsborough	300,452.00
Broward	66,796.06	Holmes	7,000.00
Calhoun	2,500.00	Indian River	258,623.65
Charlotte	72,668.20	Jackson	11,707.82
Citrus	89,465.15	Jefferson	10,226.34
Collier	69,047.06	Lake	82,065.40
Columbia	17,228.06	Lee	411,211.00
Dade	239,577.00	Lee (Ft. Myers Beach)	\$ 60,977.00
Duval (East)	84,798.16	Leon	60,000.00
Duval (Northeast)	106,875.00	Levy	15,000.00
Escambia	114,416.93	Madison	1,400.00
Flagler	13,666.00	Manatee	101,961.79
Franklin	15,000.00	Marion	12,275.00
Gadsden	11,710.00	Martin	37,767.43

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Monroe	224,000.00	St. Johns	71,024.40
Nassau	52,847.81	St. Lucie	143,835.36
Okaloosa	38,165.00	Santa Rosa	23,375.00
Orange	75,850.00	Sarasota	126,705.21
Osceola (Kissimmee)	15,000.00	Seminole	15,000.00
Osceola (St. Cloud)	17,407.00	Suwannee	9,301.34
Palm Beach	277,587.00	Taylor	4,200.00
Pasco	68,922.00	Volusia	266,500.00
Pinellas	402,175.29	Wakulla	18,000.00
Polk	170,772.05	Walton	10,375.00
Putnam	25,000.00	Washington	2,500.00
Total local funds appropriated			\$4,865,722.59
Total funds appropriated by the state			1,650,000.00
GRAND TOTAL			\$6,515,722.59

Engineering

In cooperation with the regional entomologist, a survey was made of south Walton County for the purpose of obtaining sufficient information to serve as a basis for preparing a report with recommendations for a mosquito program and the establishment of a mosquito control district. No action had been taken by the residents at the end of 1963 to try to get a district formed.

All of the proposed work plan budgets for arthropod control for the fiscal year 1963-64 were reviewed, checked and referred to the bureau director for approval. A number of programs were checked in the field with the mosquito control director when questionable items were noted in the work plans.

Specifications submitted by the counties and/or districts for the purchase of heavy equipment were reviewed, and suggestions offered when deemed necessary, for improving the specifications prior to approval of same by this office.

Regional Entomologists

The bureau has continued its service throughout the state by maintaining regional entomologists in Panama City, Jacksonville, Tampa, Orlando and Miami. The statewide location of these workers enables the bureau to give quicker and more personal service on arthropod problems to the counties and districts. The general activities of project surveys and approvals, budgeting, forming equipment specifications, reporting and evaluating varied entomological problems, and maintaining liaison between the Research Centers and the district or county organizations has been continued.

New and continued work includes: A continuation of extension work on calibrating airplanes for the application of Paris green pellets; experimental application of new chemicals for blind mosquito control; blind mosquito survey in Madison County, where a new problem has appeared; assistance in locating and acquiring land for the new dog fly laboratory (*Stomoxys calcitrans*); helping the newly organized mosquito unit, in northeast Duval County which completes the organization of the entire Florida east coast, in surveying the area for mosquito production

and setting up systems of records and accounts; assisting in sanitarian training courses; playing host to foreign students; investigating and making recommendations for the control of *Culex quinquefasciatus* found in sewage effluent; investigating structural pest complaints all over the state, especially in the southern half; continuing the mosquito trapping program with the New Jersey light trap, and doing preliminary work on bird-baited trapping to determine the incidence and density of newly incriminated encephalitis carrying mosquitoes; and, evaluating and recommending necessary action for control of the host of insect problems brought in by the public.

Arthropod Identification Laboratory

Arthropod identification, particularly of mosquitoes and allied insects of public health importance, has continued at the headquarters in Jacksonville.

"Salt Marsh Mosquitograms" have been published weekly through the calendar year to give continuing records of the 43 New Jersey type light traps operated around the periphery of the state as an aid to mosquito control districts in planning operations and to evaluate the general control. Another 77 traps from inland Florida have continued operations to further record evidence and quantity of other species throughout the state. The laboratory identified from all 120 traps a total of 1,256,477 adult mosquitoes, including 93,291 males and 1,163,186 females, as well as 1577 larvae. This does not include identifications of a miscellaneous nature and information and specimens given to school children for science projects.

The shaggy-legged Gallinipper, *Psorophora ciliata*, was unusually abundant during the summer over much of Florida, as evidenced by the numbers in the collections, and complaints from people generally.

During 1963 a study of the chironomids of Florida was continued under a National Institutes of Health grant. There were 18,862 adult chironomids from light traps, and 200 adults sent in by collectors identified. In addition, 1648 chironomid larvae were collected and put out to rear. Two hundred and seventy-five adults (16.7 per cent) emerged within 10 days and were identified. Of these, at least four were previously undescribed species.

STRUCTURAL PEST CONTROL

The bureau continued for the 16th consecutive year its responsibility for licensing the structural pest control industry and enforcing the law and regulations governing the activities of this industry. Enforcement was carried out satisfactorily for the first full year under SBH Structural Pest Control Regulations which became effective on June 30, 1962. No public hearings were held during 1963 to consider changes in the regulations or to adopt minimum standards. Minimum standards were given continuing evaluation as a possible additional means of bringing to the public of Florida worthwhile, effective termite control based on irreducible, minimum norms of treatment. The need for official action has become less urgent as a result of the Florida Pest

Control Association's adoption in 1962 and re-emphasis during 1963 of approved termite control guidelines for its industry membership. . . .

The number of licensed business locations increased five per cent as it has every year since 1947, while identification card holders increased over 13 per cent. Investigators of property owners' complaints (involving licensees) and unlicensed operators decreased by 28.4 and 40 per cent respectively. The Commission renewed 455 certificates and issued 26 new certificates during the year.

TABLE 6
SUMMARY OF STRUCTURAL PEST CONTROL
REGISTRATION AND ENFORCEMENT,
FLORIDA, 1959-63

Registration	1959	1960	1961	1962	1963
State Board of Health Licenses issued . . .	228	261	274	296	311
State Board of Health Change of Address Licenses issued . . .	24	39	29	33	34
State Board of Health Licenses revoked*	2	2	0	0	2**
State Board of Health Licenses placed on probation*	0	5	1	0	0**
Employees' Identification Cards issued . . .	2,232	2,854	2,818	2,996	3,391
Employees' Change of Address Identification Cards issued . . .	122	340	136	145	160
Employees' Identification Cards revoked or stopped*			0	7	15
Employees' Identification Cards on probation*			5	0	2
Thermal-Aerosol Certificates of authorization renewed*	14	12	12	9	8
Enforcement					
Homeowner complaints investigated . . .	162	87	94	81	58
Unlicensed illegal pest control operators investigated . . .	9	15	35	21	11
Warrants filed against unlicensed operators . . .	1	5	15	5	5
Letters of warning issued to unlicensed operators . . .	2	6	10	9	4
Enforcement miles traveled (Jacksonville office only) . . .	11,583	16,647	18,222	16,865	17,107

(*) By Structural Pest Control Commission of Florida.

(**) Excluding one certificate revoked and three placed on probation. Licenses, identification cards and thermal-aerosol certificates issued are based on 1962-63 licensing year.

All other entries are based on calendar year, 1963.

ENTOMOLOGICAL RESEARCH CENTER

MAURICE W. PROVOST, Ph.D.
Director

The year was characterized by advances in the biology and control of Florida's vector of St. Louis Encephalitis, *C. nigripalpus*. Now that another arbovirus agent, California virus, has been demonstrated in Florida, its local vector, *Aedes infirmatus*, will receive special research attention. With intensified arbovirus research in Florida it is to be expected that more viral agents will be uncovered, each with its own peculiar vector. The program of this research center will have to remain flexible enough to launch "crash" studies of the newly-discovered vectors as they are demonstrated.

ERC Research Grants — 1963 Summary

Source	Investigator	Investigation	Sum	Time Status
PHS	Harrington	Biology of larvivoracious fish	\$ 21,799	6th year, 4 to go
PHS	Lea	Autogeny in mosquitoes	26,450	4th year, 1 to go
PHS	Rathburn	Insecticide aerosols	4,550	3rd year, 2 to go
PHS	Yount	Lake limnology	27,180	3rd year, 3 to go
PHS	Lum	Mosquito larval nurture	29,911	2nd year, 3 to go
PHS	Provost	Field production of mosquitoes	21,298	2nd year, 1 to go
PHS	Bidlingmayer	Mosquito populations	26,048	1st year, 4 to go
PHS	Van Handel	Lipid synthesis in insects	53,688	1st year, 4 to go
FWS	Trost/Provost	Wildlife effects of salt-marsh flooding	6,000	3rd year, 1/2 to go
			\$216,924	

Applied for in 1963 and approved for 1964

PHS	continuing grants	\$205,806
FWS	continuing grants	3,000
	Approved 1963 Total	\$208,806
	Pending	(none)

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The total U.S. Public Health Service (USPHS) support for this research center rose to \$210,924 — distributed among eight grants.

CONTROL RESEARCH SECTION

Most of the research effort of this section in 1963 was devoted to the development of effective methods for control of the mosquito *C. nigripalpus*. Considerable progress was made toward this objective, as described in appropriate sections of this report, and this work will be continued in 1964.

Water-Management Studies

Most of the original objectives of the long-range water management studies in impounded salt marshes were attained in 1963, results being essentially the same as those reported in 1962. Briefly, adequate control of salt-marsh mosquitoes can be obtained with only seasonal flooding of marshes, and impounding with either fresh or brackish water caused no special problem from the production of other species of mosquitoes. It is expected that this project will be terminated in 1964, during which time special emphasis will be given to a study of the effects of salinity on controlling the growth of certain aquatic plants. The flooding period for seasonal plots also will be shortened to determine the feasibility of further reducing the cost of impounding.

Unfortunately, the plans for a more effective study of water management to control *Psorophora* mosquitoes in pastures did not materialize. Sites were selected and plans were formulated, but the light trap worker did not perform the construction work. This project will be dropped temporarily as this laboratory has no facilities for the earth-moving work that is required.

Larviciding Studies

A new grade of vermiculite was made available in 1963 and new formulations of granular Paris green larvicide were made on this product and field-tested. This larvicide is now available for purchase by mosquito control districts from commercial sources or the districts can formulate the material. One of the new formulations can be made for approximately \$.056 per pound, which is only two-thirds the previous cost, and makes this larvicide competitive with almost any other granular larvicide.

Granular Paris green was tested in small field plots against larvae of *C. nigripalpus*, the encephalitis vector, with encouraging results. The average kill from four tests was 98.7 per cent. An effort will be made to test this larvicide against this mosquito by aerial application in 1964. An experimental formulation of diesel oil also was tested against larvae of the encephalitis mosquito in small field plots. A dosage of one gallon per acre gave a reduction of 95.4 per cent. Additional work is planned with this larvicide in 1964. Repeated applications of Baytex and Malathion applied as aerial sprays over wooded plots failed to give satisfactory control of *C. nigripalpus* larvae, presumably because the spray deposited on the foliage before reaching the water. This emphasizes the necessity of using

granular formulations of larvicides when applied by airplane over wooded areas in Florida.

Adulticiding Studies

Much of the time of this Section during 1963 was devoted to research on aerial fogging, aerial spraying and ground fogging against the encephalitis vector, *C. nigripalpus*.

Tests with aerial fogs early in the year showed that this mosquito requires a heavier dosage of insecticides than salt-marsh mosquitoes for equal kills. Consequently, comparative tests were conducted with ground dispersed aerosols against the encephalitis mosquito and salt-marsh species. Results confirmed those of the aerial fog tests. It was found that for comparable kills, eight ounces per gallon of malathion was required for control of the encephalitis mosquito as compared to six ounces for the salt-marsh species. Effective dosages of Dibrom against these mosquitoes were $1\frac{3}{4}$ ounces per gallon and $1\frac{1}{2}$ ounces respectively when applied in the standard ground fogging operation.

Aerial fogging tests against both the salt-marsh mosquito and the encephalitis vector were discouraging. Satisfactory kills of adult mosquitoes were obtained only in open areas. Poor kills always resulted from tests where the fog was applied above a thick canopy of trees or shrubs.

Owing to the poor results of the aerial fogging tests, a project with aerial sprays was started in July and continued into October. This work was not completed with all insecticides under study, but an effective aerial spray operation using Dibrom against the encephalitis vector was determined. This insecticide applied at a volume of one gallon per acre, 0.1 pound of toxicant per acre, gave better than 95 per cent kill of caged adult mosquitoes placed at ground level in two different types of wooded habitats. In one hammock plot (an area of rich soil which is heavily wooded) of greater than average foliage density, the kill was 77 to 89 per cent at a dosage rate of $1\frac{1}{2}$ gallons per acre, .15 pounds per acre. This dosage rate killed 99 per cent in a swamp plot similar to Sawgrass Lake Swamp in Pinellas County.

Malathion and Baytex at comparable or larger dosages were less effective than Dibrom in the same test plots. Additional work will be required to demonstrate effective dosage levels of these insecticides as aerial sprays in various habitats.

The 1963 research program with insecticides makes available to the mosquito control districts valuable temporary measures for use against the encephalitis mosquito, in terms of effective mosquito kill. However, this statement does not imply that encephalitis can now be eliminated only by use of chemical insecticides to control mosquitoes. Even if it can be demonstrated that insecticides alone can control encephalitis, and this has not been shown as yet, there are serious problems of operations and costs to be considered in such a program. Costs per acre for these insecticide applications against adult mosquitoes are among the lowest for any environmental insect control program, about \$.08 per acre for ground fogging and \$.45 for aerial spraying. However, if it is required to treat thousands of acres repeatedly to control encephalitis, costs can become staggering.

Basic Research on Particle Size

As reported in 1962, a camera was developed which successfully photographs small particles, as in aerosols, sprays and mists. These photographs permit a much more accurate measurement of these small particles, than are possible with other known methods. The next objective in this project is to demonstrate which size or range of sizes of particles is most effective in killing adult mosquitoes.

Laboratory studies in 1963, using particles of less than 2.8 microns in diameter showed that these small particles will deposit on mosquitoes and cause mortality. This is of special interest, because it was previously demonstrated with the aerosol camera that more than 99 per cent of the particles produced by thermal aerosol generators used in mosquito control are less than five microns in diameter. Additional work will be needed to elucidate the relationship of particle size to mosquito kill, but these results portend new concepts in this field.

Other work under this project was the development of a portable meteorological tower for studying effects of weather on results of insecticide tests in the field. This equipment measures wind velocity, temperature and relative humidity simultaneously at elevations of 1, 6, 10, 20 and 40 feet. Limited use of this equipment already has given better understanding of the effects of wind velocities on results of field tests.

Aerial spraying provided another opportunity for particle size studies in 1963. By collecting particles on coated slides beneath tree canopies and in open areas in the same tests, it was shown that an average of 70 per cent of spray particles of 85 micron size were deposited on the foliage in heavily wooded areas before they reached the ground, where adult mosquitoes rest during daylight hours.

Sand Fly Control Studies

A project was started in 1963 to find or develop an effective larvicide for salt-marsh sand flies, specifically a larvicide which because of its chemical composition will minimize the chances of developing resistance in sand flies or mosquitoes. The mosquito resistance problem must be considered in this project because mosquito larvae will be exposed to any larvicide used in the salt marsh habitat of sand flies.

Thirty-eight insecticide formulations were screened in the laboratory against the larvae of sand flies in 1963. Of the toxicants tested, two aromatic solvents, two creosote fractions and pyrethrum showed the most promise. These formulations will be field tested in 1964.

Midge Control Studies

In 1963 most of the research emphasis was placed on developing Baytex as an efficient midge larvicide and studying its effects on other aquatic life. Baytex applied in a granular formulation at a dosage rate of 0.20 to 0.25 pound per acre in water up to 30 feet deep gave excellent control of the midge *Glyptotendipes paripes* without harming most of the other aquatic organisms. The formulation which appeared to be most

effective was a sand core granule; this formulation was effective not only against chironomids but also appeared to be very effective against the lake fly *Chaoborus*.

Thirty-two different formulations of 10 insecticides were checked as possible midge larvicides. All chemicals were initially run at 0.1 pounds per acre using the sand core Baytex granules as a standard. Of the compounds tested, two experimental insecticides, American Cyanamid's 43,913 and 52,160, show definite promise.

Although the question of BHC (an insecticide) resistance in chironomids was not fully answered after numerous tests, it was found that fish do pick up this material. Significant quantities were found in the tissues of fish, decreasing with time, but found as long as five months after the initial application.

It would appear that some sort of tolerance to EPN (an organophosphatic insecticide) was established in the midge population in one lake after four applications of this insecticide in 1963. Baytex was effective against this midge population; therefore, the observed tolerance to EPN was not general for organophosphate insecticides. The problem of resistance in midges must be explored further before any definite conclusions can be made.

Several repellants and insecticides were tested as residual sprays against adult midges. DDT applied at the rate 180mg/sq. ft. on unpainted surfaces was effective for about a month.

ETHOLOGY SECTION

Production of Salt-Marsh Mosquitoes

The salt-marsh mosquito "nursery" was improved this year by the construction, calibration and operation of a heated concrete trough in one of the swales. This, when combined with Saran screening to control sunlight penetration to the water, enables the water to be maintained at any desired temperature, within certain limits. By controlling temperature and larval diet, it is possible to synchronize the development of mosquito broods, to make them pupate and emerge at any desired time of day or night, and to make the mosquitoes at emergence big or small, lean or fat.

Also during the year many new techniques were developed for field-production work: methods for transferring larvae or pupae from swale to swale, methods for quick separation of larvae and pupae, methods for counting larvae in the swales and for getting ratios of larvae to pupae, methods of separating broods and marking the sub-groups of adults with different colored dyes, and methods for moving these sub-groups about in large cages.

The ultimate goal of all these studies is the production of millions of adult mosquitoes, upon demand, of predetermined size, weight and nutritional state at emergence, and at predetermined times for release in dispersal studies. Dispersal experiments, with marked mosquitoes, are scheduled to be resumed in 1965, after a 13-year lapse for "retooling," i.e. for developing necessary biological information and techniques.

Biology of *Culex nigripalpus*

Parallel to bait, light and suction trap collections to study the seasonal biology of *C. nigripalpus*, females were dissected on a weekly basis to observe the percentage which were parous (i.e. had already laid eggs) and hence more likely to be infected with an arbovirus. The oviparity rate was found to exhibit considerable variation which has not yet been correlated with weather factors. Analysis of winter bait trap collections, on the other hand, shows that rain following warm weather results in the maximum host-seeking activity.

Since the occurrence of mosquito larvae depends primarily on the behavior of the egg-laying female and secondarily on the suitability of the habitat selected, a study of oviposition in *C. nigripalpus* was undertaken to explain the seasonal and ecological relationships of *C. nigripalpus* breeding. The work was started with open redwood boxes having a screened drain in the center. Infusions of oak leaves and hay were much more attractive than tapwater or water mixed with hammock soil, but there was no consistent difference in the two types of infusion. Further studies showed that the attractiveness diminished after a few weeks, also that it was immediately weakened when the infusions were diluted by rain. A test comparing oviposition under opaque and transparent shelters and in exposed boxes disclosed no significant difference. Close observation of *C. nigripalpus* in the laboratory has shown that the female may oviposit on an open water surface without having any object to touch and that she does not necessarily oviposit where she first touches the water.

Since the observations of *C. nigripalpus* in early 1963 suggested that the females might enter a state of diapause (arrested development) in the winter and utilize blood meals for normal daily activity instead of the production of eggs, special observations were initiated in November to follow blood-feeding and egg-laying throughout the winter. At the end of the year, though both ovipositing and blood-seeking behavior were reduced in amount, the retardation appeared to be solely a direct response to cooler temperatures.

Toward the end of the year, investigations of longevity in *C. nigripalpus* were initiated. The mosquitoes must live much longer than the average if they are to transmit a virus. The role of the sugar meal in permitting such long life is therefore being investigated. Methods for establishing the age structure of any *nigripalpus* population are being developed as an aid to understanding the epidemiology of SLE.

Bait-Trap Technology

The development of an improved bait-trap for *C. nigripalpus* was a principal activity throughout 1963. The objectives were: concentration of the live catch in one or more removable containers which might be stored in a household refrigerator, use of a mature bird which would not require frequent replacement, and a trap designed as a permanent cage for the bird or else provided with a device for removing the bird easily. Parakeets were found to be slightly more attractive to *C. nigripalpus* than two- to four-week-old chickens, and a trapdoor solved the problem of

removing the bait, but no trap was found that would take a large catch and automatically concentrate it in one or more capsules. The closest approach, the chimney trap, is the familiar lard can trap with a trapdoor for the bird, and a carton placed over a transparent tube inserted vertically on each end of the top. Most mosquitoes by morning will have moved into the cartons.

In the search for an improved trap, there was developed a new device for comparing different features at the two ends of a single trap. It was also found that *C. nigripalpus* was more likely to remain in a trap if the catching chamber were close to the bait, that mosquitoes were extremely prone to leave collecting chambers when no bait was present, and that the size of the baffle was important in retaining the maximum number of specimens trapped.

Beyond the comparison of parakeets with chickens, very little was done to compare potential hosts of *C. nigripalpus*. The work on parakeets disclosed that they were relatively less attractive to *Aedes taeniorhynchus* than chicks, and in a test of chicks, though cockerels attracted more *C. nigripalpus* than pullets, they did not permit as large a percentage of the mosquitoes to take blood.

Colonizing *Culex nigripalpus*

A laboratory colony of *C. nigripalpus* has been started from adults caught in the Tampa Bay area in September. To solve the critical problem of obtaining fertile matings, adults of *A. taeniorhynchus* and *Culex quinquefasciatus* were placed in the same cage with *nigripalpus*. It is not known if the swarming, mating or mere flight activity of the introduced species was the responsible factor, but successful mating of *C. nigripalpus* was accomplished, and the colony was in the third generation at the year's end.

ECOLOGY SECTION

Larvorous Fish Studies

The exhaustive study of feeding habits and reproductive cycles in the most important tidewater larvivore (i.e., fish which eats mosquito larvae), *Fundulus confluentus*, continued through the year. Encoding of all data on food organisms (300 categories), by collecting site, size of fish, and month of year, is completed. Statistical analysis is one-fourth completed and should be finished some time in 1964.

As this last extensive study of foods taken by salt-marsh fishes draws to a close, preparations are under way to investigate the other end of this chain, viz. marsh productivity. This will not only place larvorous fish within the whole web of life on the salt marsh, but will bring out all the possible values of the salt marsh as an environment. Such information will permit truly informed recommendations on management of salt marsh and mangrove areas for mosquito control and sand fly control.

Studies of the hermaphroditic killifish, *Rivulus marmoratus*, were continued in 1963, and a series of scientific papers on this remarkable animal

was launched. The first paper, now published, described the 24-hour rhythm of ovulation and oviposition. This is of considerable theoretical interest because very little is known, in man or any other vertebrate, concerning environmental influences on ovulation cycles. The second paper, now in press, reports tissue-transplantation experiments which proved that wild populations of this fish are highly homozygous, i.e. all with identical inheritances, as in identical human twins. Such homozygosity in entire populations of a vertebrate animal is new to science. The third paper will be concerned with sex-control by manipulation of the laboratory environment. Again, this will deal with a phenomenon new to biological knowledge of vertebrate animals: experimental sex determination. It is expected that these studies and papers will establish *R. marmoratus* as an invaluable laboratory animal for studies of vertebrate biology.

Mosquito Sampling Studies

A new program of mosquito flight studies was begun which differed from that of previous years by concentrating on the problem of which segments of the mosquito population are taken in what kinds of traps and during which periods of the night. This required ovarian dissections of portions of all female collections in order to determine approximate age as well as egg-development stage. An example of findings is that gravid (i.e. ready to lay eggs) females of *C. nigripalpus* fly about mostly during the twilight periods at dawn and dusk. Many other behavioral findings are assured by this approach to sampling research.

The first half of 1963 was largely occupied by establishing trapping sites and constructing traps and equipment. One trapping site was located near the beach in order to sample mosquitoes associated with the salt marsh and the other was placed inland where fresh-water mosquitoes predominated. Each site is a headquarters for a variety of sampling studies and has its own weather station. Mosquitoes flying within a mile are also sampled by truck trap, as are mosquitoes at daytime rest, by power aspirator.

The jeep-mounted power aspirator was developed and perfected in 1963. This device sucks mosquitoes out of their resting places in the ground vegetation and litter. Since most of Florida's mosquito species rest on the ground by day, this enables the Center for the first time to study their *total* populations, as all sampling techniques used by night are necessarily selective. These daytime aspirator collections contain, as might be expected, large numbers of newly-engorged females. Since it is possible to identify the blood in a newly-engorged mosquito, it follows that the power aspirator opens up a tremendous opportunity to learn where various mosquitoes get their blood meals.

The first attempt to scientifically evaluate a mosquito adulticiding operation was also performed, and successfully, in 1963. This was a matter of applying the best sampling know-how to the problem of measuring mosquito populations before and after an adulticiding treatment. This is an area of research which will have to be expanded. The

Control Research Section has developed very effective adulticiding techniques. These guarantee that mosquitoes reached by the adulticiding fog or spray will die. Now the problem is to determine what percentage of mosquitoes in the wild (not caged) are reached, how much replacement of the dead by production or invasion occurs, and so on. In other words, the population effects of adulticiding must now be studied. This calls for the best knowledge of sampling and population measurement technique available.

Midge Studies

Biological studies of the pestiferous midges of the Winter Haven area continued in 1963. Seasonal rhythms of emergence in the dominant midge, *Glyptotendipes paripes*, were investigated. The possibility of sampling midge eggs as a measure of production was looked into with some hope of success.

In early 1963, the Minute Maid Corporation granted permission to study three lakes in the Lake Alfred area and to use as base of operations an acre of land in their vicinity. Fourteen 100-foot-square ponds were dug and lined with plastic. Studies of water productivity and its control were then undertaken in these ponds as well as on the lakes.

Studies on the three lakes were carried out to get background data on primary productivity and on distribution and production of lake insects. Comparisons will then be made with conditions at the end of 1964 when one lake will have been aerated as a means of depressing productivity, another lake exposed to hyacinth growth and harvest as a means of nutrient removal, and the third lake left untouched as a check. These studies are based on the assumption that midge production, algal production and other growths which get out of hand are reflections of the basic productivity of a lake which in turn is a matter of nutrients being excessive in the water.

Effects of plant cover, specifically the water hyacinth and water fern, on primary production, i.e. oxygen production, were studied in the plastic-lined ponds. It was established that the commonly employed technique for measuring primary production, the dark-light bottle, did not work in the ponds. A new method was then developed which worked equally well in lake or pond.

Salt-Marsh Wildlife Studies

In July 1961, under contract with the U.S. Fish and Wildlife Service, a study was begun to determine the effect on bird life of impounding salt marshes for mosquito control. This study continued in 1963 with results essentially as reported last year. Aquatic and wading birds used flooded marshes far more than nonflooded ones. The amount of open water and dead tree growth are important factors. Precise data on these and many other factors are being gathered, so that there will no longer be any guesswork in assessing the response of birds to such mosquito-control methods.

The contract will expire in July 1964. A thorough analysis of the data will be made by then and a detailed report prepared.

PHYSIOLOGY SECTION

Growth and Pupation Studies

In attempting to understand the circadian (i.e. 24-hour) rhythm of pupation in the salt-marsh mosquito, *A. taeniorhynchus*, experiments were designed to learn whether this rhythm was due to larval feeding and activity cycles brought on by dark and light periods, and whether such entrained rhythms led to a synchronous pupation. Other species of mosquito were studied in the same manner, for comparative values. These experiments and others related to growth and pupation yielded the following information:

(1) Larvae of *taeniorhynchus* at 32 degrees Centigrade require 72 hours of feeding before pupation. Larvae feeding no longer than this accumulate energy reserves and the pupae and adults are larger. The longer beyond 72 hours the larvae are allowed to feed before pupation, the greater are the adult reserves of fat and glycogen. (2) Larvae feed more actively by day than by night. A circadian rhythm of pupation can be produced in constant light by subjecting the larvae to alternating 12-hour periods of feeding and starvation. (3) The mechanism for synchronous pupation of a group is set in the early instars and once set the pupation follows a circadian rhythm even though in constant light or constant dark. (4) Larvae reared in constant light need a minimum break of three hours of dark per 24 hours to establish the circadian rhythm of pupation. The same can be done for larvae reared in darkness by only one minute of light every 24 hours. (5) *C. quinquefasciatus* shows a circadian rhythm of pupation similar to the classical *taeniorhynchus*, but no rhythm could be induced by any combination of food, temperature or photoperiod in six foreign strains of *Aedes aegypti*.

Aseptic Rearing of Mosquitoes

Rearing larvae of *A. taeniorhynchus* under aseptic conditions was started in September. Larvae will apparently grow in a liquid medium if most of the chemical components used for growth are provided in colloidal form rather than in solution. A synthetic medium was used successfully to demonstrate this point. The next step was a completely chemically defined diet. This was achieved under aseptic conditions and the larval growth was comparable to that on the usual contaminated medium.

In formulating any synthetic medium it was observed that in order to obtain favorable larval development it was necessary to provide a buffer system to neutralize the metabolites produced by the larvae in growing.

Egg Development Studies

General studies of autogeny (ability to produce a first egg batch without a blood meal) in *A. taeniorhynchus* established the facts that holding newly-emerged females at different temperatures for varying periods affected the development of autogenous eggs, and both larval

and adult diets influence the ability of females to produce autogenous eggs.

Studies were continued on the hormonal regulation of autogenous egg development. In addition to continuing certain experiments with the corpora allata (a pair of glands in the neck of the mosquito which produce a hormone involved in egg development), certain cells in the brain were shown to influence egg development in certain species of mosquitoes by noting the effect of removal. It is possible in certain instances to start egg maturation by implanting groups of these cells into females with their own cells removed and hence egg development halted. Further experiments have been made to show that removal of these cells from the brain has a drastic effect on sugar metabolism in both male and female mosquitoes.

Energy for Flight

Experiments have been started to keep individual mosquitoes in continuous flight until they are exhausted and can fly no more. The intent here is to determine whether mosquitoes use their fat reserves (which under certain conditions are very great) during flight or whether they can use only their carbohydrate reserves when flying. This information is of primary importance in understanding the flight potential of mosquitoes of different ages. It will have a considerable bearing on future mosquito dispersal studies.

BIOCHEMISTRY SECTION

During the year, studies were continued on the effect of increasing doses (i.e., meals) of sugar on fat and glycogen metabolism in *Aedes sollicitans*. A new investigation was started on the effect of a single, standardized sugar meal at different temperatures from 10 degrees C. to 35 degrees C. Results so far have shown that the utilization of sugar, and the net conversion to fat and glycogen (the primary energy reserves for survival and flight, respectively) accelerated by a factor of two for every 10 degrees of temperature increase. This suggests that these metabolic processes follow laws of temperature reaction similar to those of non-biological chemical reactions.

Another project initiated concerned the rate of oxidation and synthesis (i.e., use and building up as reserves) of individual fatty acids (the primary building block of fat), using gas-liquid chromatography. The analytical part of this study was carried out in the department of physical chemistry at the University of Leiden, Holland. Preliminary results show that temperature has little effect on the composition of fatty acids synthesized from sugar by mosquitoes. The mosquito samples were reared and prepared in Vero Beach and shipped to Holland for analysis.

MISCELLANEOUS ACTIVITIES

The Entomological Research Center continued its close collaboration with the Encephalitis Research Center. The Ethology Section and the director assumed the primary responsibility for designing the entomologi-

cal phases of the Tampa Bay studies, and later in the year assisted in the analysis and interpretation of results. There was a fruitful exchange of ideas resulting from the work done there and the work done in Vero Beach on the biology of *C. nigripalpus*, the vector of St. Louis Encephalitis in the Tampa Bay area.

From December 9-12, 1963, a Mosquito Biology and Control course was given at the Entomological Research Center, sponsored by the SBH, the Florida Anti-Mosquito Association, and the USPHS Communicable Disease Center. A measure of the demand for such instruction in Florida was the attendance of 78, an unexpectedly large number since the course was given to 60 only two years ago. Of this year's registrants, 67 were mosquito control workers representing 26 districts and counties, seven were Bureau of Entomology personnel, and four were from the U. S. Navy, the U. S. Air Force and the National Aeronautic and Space Administration.

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BUREAU OF FINANCE AND ACCOUNTS

FRED B. RAGLAND, B.S.
Director
PAUL R. TIDWELL, B.B.A.
Assistant Director

Business and financial management of the agency is a major responsibility of the bureau and includes accounting, budgeting, purchasing, property control, duplicating services, mail, shipping, receiving, automobile control and assignment and buildings and grounds maintenance. This requires close working relationship with the State Board of Health (SBH) program directors in planning full utilization of funds that have been provided. Sound budget preparation for the various health programs is necessary. When funds are provided and properly budgeted, then a logical system of accounting for these funds and issuance of reports concerning their expenditure is required. This, along with the dissemination of proper budget control information, is accomplished by this bureau. Funds are received from federal, state, county and private sources. Each bears its own set of rules, laws and regulations as to administration and expenditure.

The fiscal year ended June 30, 1963, was the second year of the 1961-63 state biennium for which the 1961 Legislature made available to the agency state funds through the General Appropriation Act. These appropriations were generally based upon maintaining present programs at the same level with no additional funds for new programs or for expansion.

Overall, approximately 24.5 million dollars was spent during the fiscal year ended June 30, 1963. This represented almost \$3.5 million more than was spent the previous fiscal year. In three instances there was notable increase. The Hospital Services for the Indigent program increased about a million dollars to slightly over \$5 million for 1963 as a result of the state's greater use of federal participation for those on public assistance rolls. The basic expenditures through county health departments (CHD) increased almost \$1.5 million to a total of slightly over \$10 million for 1963, due primarily to more funds from local sources. Cuban Health Services increased three quarters of a million dollars to a total of approximately one million dollars. All funds for the Cuban Health Services are provided by the federal government. Gradual increases were experienced in the state's general public health programs, such as chronic diseases, preventable diseases and public health laboratory support.

At the close of the fiscal year June 30, 1963, the number of state-owned and operated automobiles was 91. These were driven approximately 1,350,000 miles during the year. In addition, the agency owned 35 trucks or special purpose vehicles such as: mobile tuberculosis, dental and engineering laboratories. These units traveled approximately 300,000 miles during the year. Assignment and use of all vehicles is continually reviewed to insure that they are used in the most effective and economical manner in carrying out the agency travel responsibilities. During 1963, 18 old vehicles were traded and 24 new units acquired.

The bureau director and his staff continue to give assistance to the overall planning of the health department activities, particularly in the area of coordinating financial plans.

PURCHASING AND PROPERTY SECTION

FRANK E. CRAFT, B.S., B.A.
Purchasing Agent

The purchasing section is responsible for the procurement of the agency's supplies, equipment and services. Purchases are made in accordance with rules and regulations issued by the State Purchasing Commission covering the solicitation of bids, advertising for bids under certain conditions, printing regulations, etc. Purchases are also made under contracts and maximum price regulations negotiated by the State Purchasing Commission. The purchasing department cooperates with other state agencies in the exchange of information pertaining to contracts for volume purchases which enables this agency to purchase certain items under contracts negotiated by other state agencies and to permit purchases under our contracts by others. The property division of this section carries out the responsibility of recording, marking and inventorying of all property purchased (desks, chairs, office equipment, laboratory equipment, etc.). The State Statutes prescribe records that must be maintained and the frequency of physical inventories.

The purchasing office issued 4545 separate purchase orders which totaled \$1,485,206.90 for the year 1963. This is an increase over past years and represents the activity necessary to supply the increased needs of the various bureaus and divisions of this agency. A considerable increase in orders written was due to the purchase of equipment and supplies for the newly established Encephalitis Research Center in Tampa. CHDs normally handle purchases locally within the organizational framework of the CHD; however, their purchasing procedures must also conform to the Florida Statutes governing purchases, such as obtaining bids and advertising for bids where required. The following of good business practices in procuring materials through competitive bids is advocated. The purchasing agent at the SBH assists the CHD wherever possible with their purchasing requirements.

Property Control

The responsibility of this section is to see that capital outlay items are assigned property numbers, maintain records and process annual physical inventories on over 160 locations.

Property values reflected by the SBH Plant Ledger as of June 30, 1963 were as follows:

Real property	\$2,819,024
Furniture and equipment	1,074,758
Automotive equipment and trailers.....	254,604
Books and film	296,202
Total	\$4,444,588

Overall, dollar value increase as of June 20, 1963 was \$361,309. This

was considerably over the 1962 increase of \$135,905. The Regional Environmental Health Building, Winter Haven, was completed during the period of this report.

Control of property and maintenance of records as required by Florida Statute continues to be a job of considerable magnitude, not only because of the dollar increase but as the SBH continues to grow and departments acquire new quarters property cards have to be changed or corrected for insurance purposes on any change of location.

The importance of correct maintenance and control of property is continually stressed within the agency to insure that the records reflect the current status of all property items owned by this agency.

Insurance

Fire insurance on buildings and contents is carried in the State Fire Insurance Fund under the supervision of the State Fire Insurance Commissioner. Coverage on boilers and heating equipment is carried in a master policy supervised in the office of the State Fire Insurance Commissioner. Scientific equipment in various mobile laboratories is protected by a "Floater" or "Transportation" policy. Automobiles, trucks and other special-purpose motor vehicles owned by this agency are covered by a fleet policy to include public liability, property damage, fire, theft and comprehensive. The agency acts as self-insurers for collision damage. Other major insurance coverages include: money and securities, broad form, loss inside and outside of premises; position schedule bond for narcotic inspectors; public employees honesty blanket position bond; Workmen's Compensation.

Seven claims amounting to \$3384.08 were settled under the agency's fleet automobile liability policy during 1963. Damages to SBH cars caused by others were settled for \$273.56. This agency's insurance company repaired damages to SBH vehicles under comprehensive clause \$997.67 and theft \$13.38. The SBH as self-insurer for damages caused by collision paid \$690.02 for repairs in this respect. This figure is considerably less than the cost of carrying collision coverage in our fleet liability policy.

BUILDINGS AND FACILITIES SECTION

JOHN C. CLARKE
Supervisor

Maintenance—During the year 843 written work requests were processed and only 21 were cancelled or uncompleted. Twelve thousand "maintenance man" hours were available and about two-thirds of these man hours were expended on the work requests. The remaining labor availability was expended in preventive maintenance.

Perhaps the most important item undertaken during the past year was the electrical engineering survey. The engineer's report disclosed that the total connected electrical load far exceeded the maximum input capacity and the capacity of the installed safety devices of the Hanson building and the IBM Section of the J. Y. Porter building. In view of the ever increasing electrical loads it was decided to explore the possibility of

making an electrical feed and branch circuit installation which would obviate a continuing makeshift installation.

Shipping and Receiving—This activity continues to feel the increased demand for the provision of drugs, printed forms, various types of containers, minor laboratory equipment and other incidental supplies. Lack of working and storage space has also been a handicap.

Mailing—Rules and procedures have been instituted so that the mail room now operates in a manner as nearly like a branch U. S. Post Office as can be practicable in a state agency.

The ditto and addressograph functions have consolidated within one area all machine addressing equipment utilized for addressing mail and packaged items.

Security—Buildings and grounds security is maintained during non-working hours. During the year 50 potential legal evidence specimens were received after working hours and stored in accordance with existing instructions. Officers have made five court appearances.

Duplicating—This year 1981 requisitions were processed through the department, requiring handling of 2048 offset plates and 2924 stencils. Total machine impressions by both methods of reproduction amounted to 9,602,002.

FISCAL SECTION

BYARD W. HARRIS
Fiscal Officer

The essential function of this section is the determination of the legality and propriety of payments under the various programs of the agency, processing all bills and vouchers for payment, the financial record keeping and preparation of required financial reports.

The financial transactions of the SBH for the fiscal year ended June 30, 1963, as reflected by the records of the bureau, are presented in a condensed form at the end of this section. A detailed financial report for the fiscal year ended June 30, 1963, has been prepared and distributed to the Governor, members of the Board of Health, and all bureaus, divisions and CHDs.

The funds received (or appropriated) for the fiscal year ended June 30, 1963, were from the following sources:

State appropriations and funds	\$ 8,421,743.00	34%
From local agencies for county health departments	6,766,986.19	27%
From federal grants-in-aid	3,728,822.08	15%
From research grants	930,199.12	4%
From Hospital Services for the Indigent:		
*Local sources	295,873.05	1%
State Department of Public Welfare	4,600,333.03	19%
From federal for building	1,849.80	—
	<hr/>	
	\$24,745,806.27	100%

*These funds deposited with and disbursed through the State Treasury. Does not include \$2,679,402.78 disbursed locally.

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The operating and capital expenditures by the SBH were for:

Personal services (salaries and professional fees)	\$11,604,220.37	48%
Contractual services (repairs, utilities, travel expenses, hospital program)	9,171,425.86	37%
Materials and supplies (office, medical laboratory, mosquito control, educational)	1,439,416.45	6%
Current charges (rent, insurance, merit system costs, registrar fees)	350,681.24	1%
Capital outlays (equipment and fixed assets)	460,026.26	2%
Grants to counties and Mosquito Control Districts	1,221,910.48	5%
Miscellaneous (education aids and subsidies)	158,273.27	1%
TOTAL	\$24,405,953.93	100%

In addition to funds reported in the annual financial report and summarized above, certain other funds and services were made available by the U. S. Public Health Service (USPHS) to the activities of the Board but were not paid directly to the SBH. They include:

Value of USPHS personnel on loan to the Board in preventable disease programs	\$217,351.23
Fiscal operation followed a budget plan of 183 departmental budgets.	

These budgets were periodically revised as required.

SUMMARY OF RECEIPTS AND DISBURSEMENTS AND BALANCES FOR THE FISCAL YEAR ENDED JUNE 30, 1963

RECEIPTS

FROM STATE FUNDS

From State Appropriations:	
General Public Health	\$ 3,668,644.00
Consolidated Mosquito Control	1,650,000.00
County Health Units	1,660,000.00
Dental Students Scholarships	40,000.00
Medical Students Scholarships	40,000.00
Hospital Service for Indigents	1,025,000.00
Mental Health Council	140,181.00
Air Pollution	72,918.00
Purchase of Salk and Combined Vaccines	125,000.00

Total State Appropriations \$ 8,421,743.00

State Revolving Fund:	
County Health Units	\$ 2,500.00

FINANCE AND ACCOUNTS 53

FROM FEDERAL GRANTS-IN-AID

Public Health Service:	
General Health	\$ 434,228.00
Chronic Illness and Care of Aged	457,530.70
Venereal Disease	156,607.00
Tuberculosis Control	77,790.22
Heart Disease	192,392.50
Cancer Control	89,938.50
Mental Health	164,357.30
Water Pollution	117,527.00
Radiological Health	38,540.00
Mental Health Planning	25,000.00
Cuban Health Services	1,148,000.00
Children's Bureau:	
Maternal and Child Health	826,910.86

Total Federal Grants-in-Aid \$ 3,728,822.08

FROM GRANTS AND DONATIONS \$ 930,199.12

FROM LOCAL AGENCIES FOR COUNTY HEALTH UNITS \$ 6,764,486.19

FROM HOSPITAL SERVICE FOR INDIGENTS

Local Sources	\$ 295,873.05
State Welfare Board	4,600,333.03

Total for Hospital Service for Indigents \$ 4,896,206.08

FROM FEDERAL FOR BUILDING \$ 1,849.80

TOTAL RECEIPTS \$24,745,806.27

Balance July 1, 1962 \$3,301,849.51 (Less expired appropriation of \$443.50) \$ 3,301,406.01

TOTAL RECEIPTS AND BALANCES \$28,047,212.28

DISBURSEMENTS

OPERATING EXPENSES

Personal Services:	
Salaries	\$11,095,663.72
Other Personal Services — Individual	358,376.89
Other Personal Services — Other	150,179.76
Contractual Services:	
Travel Expense, including subsistence and lodging	1,327,862.44
Communication and Transportation of Things	320,564.72
Utilities	147,409.96
Repairs and Maintenance	140,555.40
General Printing and Reproduction Service	79,346.41

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Subsistence and Support of Persons	6,782,496.89
Other Contractual Services	373,190.04
Commodities:	
Bedding, Clothing and other Textile Products	2,781.58
Building and Construction Material and Supplies	13,826.92
Coal, Fuel Oil and other Heating Supplies	12,289.97
Educational, Medical Scientific and Agricultural	
Materials and Supplies	1,093,488.27
Maintenance Materials and Supplies	83,502.61
Motor Fuel and Lubricants	52,139.20
Office Materials and Supplies	176,159.94
Other Materials and Supplies	5,227.96
Current Charges:	
Insurance and Surety Bonds	51,607.38
Rental of Buildings	114,107.05
Rental of Equipment	46,244.70
Other Current Charges and Obligations	88,743.92
Merit System	49,978.19
TOTAL OPERATING EXPENSES	\$22,565,743.92
CAPITAL EXPENSES	
Books	\$ 10,696.70
Buildings and Fixed Equipment	40,269.06
Educational, Medical, Scientific and	
Agricultural Equipment	172,577.76
Motor Vehicles — Passenger	44,490.50
Motor Vehicles — Other	1,639.47
Office Furniture and Equipment	182,499.17
Other Structures and Improvements	7,719.92
Other Capital Outlay	133.68
TOTAL CAPITAL EXPENSE	\$ 460,026.26
GRANTS, SUBSIDIES AND CONTRIBUTIONS	
Grants to Counties and Mosquito Control Districts	\$ 1,221,910.48
Other Educational Aids and Subsidies	158,273.27
Total Grants, Subsidies and Contributions	\$ 1,380,183.75
TOTAL PROGRAM EXPENSES	\$24,405,953.93
NON-OPERATING DISBURSEMENTS	
Transfers	\$ 117,527.00
Refunds	118,437.01
Total Non-Operating Disbursements	\$ 235,964.01
TOTAL DISBURSEMENTS	\$24,641,917.94
BALANCE JUNE 30, 1963	\$ 3,405,294.34
TOTAL DISBURSEMENTS AND BALANCES	\$28,047,212.28

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SCHEDULE OF EXPENSES
BY HEALTH PROGRAM ACTIVITY

Health Services to mothers, infants, pre-school and school children	\$ 3,503,900.00
Statewide Venereal Disease Control, Diagnosis and Referral of Infectious Venereal Disease Patients to Treatment Clinics— also Operation of Program	1,158,700.00
Mosquito and Pest Control Programs, Including Pest Control Law Enforcement	3,235,152.17
Indigent Hospitalization	6,054,204.73
Statewide Sanitary Engineering and Environment Sanitation	2,046,576.54
Statewide Cancer Control Program	628,700.00
Statewide Tuberculosis Control, X-Ray Survey and Follow-up Work	1,117,200.00
Mental Health Program	1,300,300.00
Statewide Narcotic, Drug, Medical Practice Law Enforcement	190,983.02
Radiological and Occupational Health (including Air Pollution)	257,307.19
Chronic Illness and Care of the Aged	1,540,400.00
Heart Disease Program	481,300.00
Other Health Programs and Administration	2,891,230.28
TOTAL EXPENSES	\$24,405,953.93

SCHEDULE OF EXPENSES
BY FUNCTIONAL ACTIVITY

General Public Health (also includes Miscellaneous Health Activi- ties and training)	\$ 1,570,123.74
Vital Statistics	258,047.11
Health Education	91,102.36
Sanitary Engineering	509,829.25
Entomology and Mosquito Control	2,210,653.98
Laboratories	843,441.83
Tuberculosis Control	236,069.29
Preventable Disease (excluding Tuberculosis Control)	507,163.32
Mental Health	312,069.23
Narcotics	156,717.73
Maternal and Child Health	427,259.87
Hospital Service for the Indigent	6,054,204.73
Local Health Service	537,559.09
Chronic Diseases	446,730.53
County Health Units	10,244,981.87
TOTAL EXPENSES	\$24,405,953.93

TABLE 7
FUNDS RECEIVED BY COUNTY HEALTH UNITS FROM FLORIDA STATE BOARD OF HEALTH AND
LOCAL SOURCES FOR THE FISCAL YEAR ENDED JUNE 30, 1963

COUNTY	STATE BOARD OF HEALTH			LOCAL FUNDS					
	Total Funds	Total	State	Federal	Total	Board of County Commissioners	Board of Public Instruction	Cities	Fees and Miscellaneous
Alachua	\$ 201,131	\$ 63,822	\$ 59,577	\$ 4,245	\$ 137,309	\$ 105,479	\$ 9,100	\$ 14,833	\$ 7,897
Baker	20,041	7,608	7,608		12,433	12,347			86
Bay	96,068	46,613	46,613		48,455	46,984			1,471
Bradford	34,014	14,370	14,370		19,644	14,210	2,800	2,400	234
Brevard	187,876	50,606	48,966	1,650	137,270	136,098	17,500	2,290	1,172
Broward	418,694	105,247	105,247		313,447	290,923	600		2,734
Calhoun	21,277	9,018	9,018		12,259	10,700		1,500	959
Charlotte	58,215	17,751	17,751		40,464	32,776	3,600		6,188
Citrus	31,273	18,257	18,257		13,016	9,326			90
Clay	44,571	19,832	19,832		24,739	22,217		2,400	122
Clay Building Fund	8,660				8,660	8,660			
Collier	66,595	29,392	29,392		37,203	30,854		600	6,349
Columbia	49,560	21,256	21,256		28,304	27,435			269
Dade	1,444,865	269,987	134,615	135,372	1,174,878	1,057,993			116,885
DeSoto	32,119	20,354	20,354		11,765	11,596	1,800		169
Dixie	17,662	8,018	8,018		9,644	7,789			55
Duval	268,230	123,141	117,861	5,280	145,089	113,116		3,960	28,013
Escambia	304,651	86,664	50,781	35,883	217,987	121,175	6,000	64,984	25,828
Flagler	16,929	5,400	5,400		11,529	11,496			61
Franklin	26,467	10,218	10,218		16,249	16,188			67
Gadsden	12,794	3,527	3,527		9,272	9,272		773	682
Gilchrist	15,796	5,422	5,422		10,374	14,531	3,602		6
Glades	30,867	13,329	13,329		17,538	14,454	600		67
Gulf	30,867	13,329	13,329		17,538	12,167	3,000		84
Hamilton	24,169	10,475	10,475		13,694	14,454		1,395	132
Hardee	44,621	14,088	14,088		30,533	28,690	500		1,343
Hendry	39,844	11,183	11,183		28,661	16,310			12,351
Hernando	12,012	8,805	8,805		3,207	52	3,015		140
Hillsborough	43,253	24,292	24,292		18,961	18,366			595
Holmes	1,017,915	145,482	63,536	81,946	872,433	642,285			230,148
Indian River	28,494	13,597	13,597		14,897	7,333	7,500	4,500	64
Jackson	59,174	25,644	25,644		33,630	22,443	3,000		3,587
Jefferson	76,096	41,630	33,720	7,810	34,566	30,122	3,000	1,100	344
Lafayette	36,573	15,270	15,270		21,303	5,000	4,000		12,303
Lafayette	14,148	6,139	6,139		8,009	8,000			9

TABLE 7 (Continued)
FUNDS RECEIVED BY COUNTY HEALTH UNITS FROM FLORIDA STATE BOARD OF HEALTH AND
LOCAL SOURCES FOR THE FISCAL YEAR ENDED JUNE 30, 1963

COUNTY	STATE BOARD OF HEALTH				LOCAL FUNDS				
	Total Funds	Total	State	Federal	Total	Board of County Commissioners	Board of Public Instruction	Cities	Fees and Miscellaneous
Lake	\$ 97,009	\$ 31,302	\$ 31,302	\$	\$ 65,707	\$ 63,703	\$	\$ 1,495	\$ 509
Lee	85,759	36,027	36,027	.....	49,732	47,798	.....	5,000	1,934
Leon	139,398	89,748	78,273	11,475	109,550	80,525	9,397	.....	14,727
Levy	31,720	12,867	12,867	.....	18,853	11,055	5,700	.....	2,098
Liberty	14,204	4,939	4,989	.....	9,265	9,259	.....	.....	6
Madison	32,643	16,433	16,433	.....	16,210	16,101	.....	.....	109
Manatee	172,132	58,365	58,365	.....	113,767	98,653	4,000	5,600	15,114
Marion	98,004	36,040	36,040	.....	61,964	51,229	750	.....	1,185
Martin	37,870	18,014	18,014	5,040	19,856	18,179	6,000	4,000	4,443
Monroe	92,043	34,726	29,686	.....	57,317	42,874	.....	.....	927
Nassau	60,905	19,254	19,254	.....	41,651	41,518	.....	.....	133
Nesquehony	72,957	27,201	27,201	.....	45,756	40,192	5,000	.....	564
Okaloosa	24,289	9,509	9,509	.....	14,780	14,709	.....	.....	71
Okeechobee	434,629	110,068	90,982	19,086	324,561	246,351	25,300	4,520	48,390
Orange	37,540	18,348	18,348	.....	19,192	16,650	2,400	2,500	142
Osceola	546,489	106,370	94,171	12,199	440,119	300,443	29,415	.....	107,761
Palm Beach	36,855	16,654	16,654	.....	20,201	18,300	.....	.....	1,901
Pasco	935,902	141,285	80,554	60,731	794,617	652,168	28,125	7,200	136,390
Pinellas	398,271	96,870	74,769	22,101	296,401	238,966	.....	.....	22,110
Polk	76,468	33,335	33,335	.....	43,133	39,930	4,200	.....	3,203
Punta Rosa	48,091	22,578	22,578	8,928	25,513	18,401	.....	.....	2,912
Santa Rosa	220,399	59,301	50,373	.....	161,098	137,383	11,916	5,700	19,715
Sarasota	73,041	25,406	25,406	.....	47,635	33,955	.....	.....	1,764
Seminole	60,448	27,959	27,959	.....	32,489	24,524	1,920	7,500	245
St. Johns	96,131	42,893	39,941	2,952	53,238	37,352	.....	.....	8,386
St. Lucie	24,075	11,567	11,567	.....	12,508	11,876	800	.....	632
Sumter	32,033	18,533	18,533	.....	13,500	13,375	.....	.....	125
Suwannee	28,133	14,464	14,464	.....	13,669	12,760	.....	.....	119
Taylor	17,296	9,779	9,779	.....	7,517	7,492	.....	.....	25
Union	307,367	91,455	87,990	3,465	215,912	161,077	19,350	.....	35,485
Volusia	16,818	6,809	6,809	.....	10,009	10,000	7,000	2,400	9
Wakulla	34,612	16,154	16,154	.....	18,468	8,950	.....	.....	108
Walton	28,537	13,243	13,243	.....	15,294	15,231	.....	.....	63
Washington	38,567	38,567	38,567	.....	.....	.....	.....	.....	.....
County Health Units, State at Large	.....	.....	.....	.....	.....	.....	.....	.....	.....
TOTALS	\$9,381,938	\$2,618,250	\$2,200,087	\$418,163	\$6,763,688	\$5,480,052	\$245,261	\$146,650	\$891,725

BUREAU OF LABORATORIES

NATHAN J. SCHNEIDER, Ph.D., M.P.H.
Director

The bureau provided laboratory services to the local health units and to other bureaus and divisions of the State Board of Health (SBH) for the successful performance of their varied public health programs. Similarly, diagnostic and epidemiologic assistance was provided to licensed practitioners of the healing arts in Florida. The bureau carried out its responsibilities as charged by state regulations to approve private and hospital laboratories for the performance of syphilis serology on prenatal and premarital patients; to assist the Board of Examiners in the Basic Sciences to license medical technologists and medical technologist directors; and to provide laboratory services in the regulation of the sale of drugs, cosmetics and devices in Florida.

The Legislature at its last session appropriated funds for the construction of replacement public health laboratory facilities in Tampa and Pensacola. Planning funds were released and the architects were designated in December. The present antiquated facilities are in need of extensive repairs. Therefore, every effort is being made to proceed as expeditiously as possible in the drawing of plans and initiating of construction.

DIAGNOSTIC SERVICES

As in previous years, the laboratory offered a wide variety of diagnostic services. Considering the general public health services only as shown in Table 8, there was a total of 2,811,981 examinations performed in the year under review as compared to 2,771,705 tests performed in 1962. The major increase was noted in the number of examinations of blood specimens for syphilis, sputum specimens for tuberculosis, stool specimens for enteric pathogens, drinking and pollution waters for bacteriological examination and environmental specimens for radiological activity. Offsetting these increases were reductions in examinations for Rh blood typing, lactobacillus counts for dental caries bacteriology and virology. As compared to the previous year, all of the laboratories except Jacksonville and Tallahassee experienced moderate increases in the overall number of examinations performed; reductions in the Jacksonville laboratory were in syphilis serology and virology, while in Tallahassee fewer dairy products accounted for most of the decrease in work load.

The trend of increased demands for sanitary bacteriology was particularly noticeable in water examinations. Drinking and swimming pool waters increased from 171,498 examinations in 1962 to 183,914 in 1963. Seven county health departments (CHD) have been approved for testing private water samples by the membrane filter procedure. This increase was significant because specimens which might have been sent to the state laboratories were examined in the counties. Four of these

counties, St. Lucie, Pinellas, Manatee and Charlotte, have also been approved for testing public waters and swimming pools.

Pollution water survey examinations have increased from 66,680 in 1962 to 83,060 in the year under review. This increase was a direct result of the bacteriological surveying of new oyster growing beds along the coastal areas of Florida. Additional equipment was obtained and part-time college students used to supplement available laboratory facilities to accommodate a crash program of surveying oyster beds in the Tampa Bay area and along the Atlantic Ocean from St. Johns County to St. Lucie County. Demands for more bacteriological examinations of waters used for drinking, industry and recreational purposes can be expected in Florida.

The results of examinations by findings are presented in Table 8; a total of 731,750 blood specimens were examined for syphilis of which 40,158 were found reactive. Excluding the specimens unsatisfactory for testing, the proportion reactive was 5.6 per cent. This compares to 4.9 per cent in 1960, 5.4 per cent in 1961 and 6.1 per cent in 1962. Although it is too early to state, it is hoped that the downward turn in the proportion of reactives in 1963 was indicative of reduced syphilis infections in Florida. Special attention was given to blood specimens submitted from problem cases of suspected syphilis to rule out biologic false positives. These specimens were subjected to a special battery of tests which included the Kolmer fifth volume nontreponemal cardiolipin antigen procedure, the Kolmer Reiter Protein (KRP) procedure and the fluorescent antibody (FTA-200) tests. Of particular interest was the latter; a total of 299 specimens were examined by the FTA-200 procedure and 50 per cent were reactive. This compares to the findings of 116 specimens referred to the Venereal Disease Research Laboratory of the U. S. Public Health Services (USPHS) for the Treponemal Pallidum Immobilization (TPI) test - viz. 65 per cent were reactive or weakly reactive.

The number of diagnostic specimens found positive for diphtheria in 1963 was 65; this continues a downward trend in percentage positives which were 4.5 per cent in 1960, 3.3 per cent in 1961, 2.6 per cent in 1962 and 1.2 per cent in the year under review. Apparently the extensive immunization programs are having their effect on the clinical cases of diphtheria being detected in Florida. It is noted, however, that most of the diphtheria isolations were made in north Florida.

The total number of public health tuberculosis specimens examined during 1962 amounted to 45,057 of which 1974 or 4.4 per cent were positive for *M. tuberculosis* or the unclassified mycobacteria, as compared to 8.2 per cent in 1962 and 7.1 per cent in 1961. There remains a significant reservoir of undetected infection in Florida. Considerable savings in technician time was noted in the elimination of smear examinations of sputum specimens from known tuberculosis patients. Approximately 20,000 such specimens were examined by culture only. Assuming five minutes were required to prepare, stain and examine each smear, 166 additional technician hours were available for more careful microscopic and cultural bacteriologic examination of specimens

from suspect tuberculosis patients. Thus, cooperation from clinicians in requesting smear examination on undiagnosed patients enabled the laboratory to meet demands for increased service.

Microscopic smear specimens submitted for the presence of *N. gonorrhea* and other infections decreased moderately during 1963. The proportion of positives for gonorrhea was 15.5 per cent in 1963 as compared to 16.0 per cent for 1962. Similarly, cultures for *N. gonorrhea* decreased from 25,824 in 1962 to 11,228 in 1963, due in part to the changeover from culture to the fluorescent antibody (FA) technic for gonorrhea in the Jacksonville laboratory. Further comments on the efficacy of the FA procedure are given later in the section under special studies.

There was a marked increase in the number of fecal specimens submitted for examination for enteric pathogens; 54,239 specimens in 1963 as compared to 47,728 in the preceding year. A total of 105 typhoid and 867 *Salmonella* isolations were made, representing a substantial increase in number of actual isolations as compared to the preceding two years. In contrast, *Shigella* isolations which had increased from 94 in 1960 to 215 in 1962 declined to 164 in 1963.

Human leptospirosis was confirmed by laboratory findings in seven patients during the year under review. Paired serum specimens of patients with clinical aseptic meningitis of suspected viral etiology were tested for a rise in agglutination titer against killed leptospiral antigens.

Among the miscellaneous examinations, there was a decline in the finding of early cases of syphilis. In the year of this report, 64 darkfield specimens were found positive for *T. pallidum*, continuing a decline which started in the preceding year. In 1957 and 1958 there were no positive darkfields reported; in 1959 there were 72; in 1960—160; in 1961—194 and in 1962 there were 150. The finding of *T. pallidum* in lesions is diagnostic evidence of syphilis.

There was a small increase in specimens found positive for mycology; in 1963, a total of 1680 specimens as compared to 1631 in 1962. Approximately 80 per cent of the positives were *Candida albicans* and 19 per cent were dermatophytes.

A total of 2129 bacteriological cultures were received in the laboratory for identification. This service is of value to hospital and private clinical laboratories which, because of limited facilities or lack of specific and specialized reagents, seek assistance or confirmation in identifying bacteriological isolations made in their laboratories.

There were numerous miscellaneous special bacteriological services offered by the bureau including typing of beta streptococci, urine bacteriological plate counts, sterility testing of drugs and biologicals. A total of 855 specimens were submitted under these categories.

In the field of dental caries bacteriology, 3053 saliva specimens were examined for lactobacillus counts. Reports of findings were sent to the dentists through the Bureau of Dental Health which provides professional interpretation of results.

There was a modest increase in the number of stool specimens examined for intestinal parasites during the year under review as compared to the preceding year. The proportion positive for hookworm was somewhat lower; in contrast, there were more fecal specimens positive for ascaris, enterobius, trichuria, *E. histolytica* and other protozoa. Again, as in the preceding six years, no positive malaria blood smears were found in the state laboratories.

In the chemistry laboratory, there was a substantial increase in the number of blood specimens examined for blood sugar, cholesterol and hemoglobin. It has been the practice of the laboratory to accept such specimens only from the CHDs in connection with their diabetic, prenatal and other case-finding clinics. Clinical chemistry "Autoanalyzers" were purchased and installed in the Jacksonville, West Palm Beach and Tampa laboratories where demands are met for blood sugars and related clinical chemistry tests. There is a need to provide autoanalyzers in each of the other regional public health laboratories in anticipation of increasing chronic disease case detection programs in CHDs.

The radiological chemistry section, established in the Orlando laboratory in late 1960, was equipped with a multichannel analyzer and other sophisticated radiological testing equipment. There was a substantial increase in the number of water, milk, air and other environmental specimens tested for radiological activity. In 1963, chemical and radiological procedures were developed and adapted to the needs of the state surveillance program. Milk samples delivered to the regional laboratories were filtered through ion exchange resins and the resins were shipped to Orlando for the measurement of Iodine-131. Other milk samples to be tested for Strontium-89, Strontium-90 and Cesium-137, were shipped directly to the Orlando laboratory for testing. Tissues and feed samples were also tested. This activity, part of the background surveillance program, is carried out directly under the guidance of the Division of Radiological and Occupational Health. Close liaison was maintained with the USPHS Radiological Laboratories in order to standardize and evaluate test procedures.

The number of veterinary public health specimens examined in the laboratory remained at a low level. With the establishment of the Animal Diagnostic Laboratory at Kissimmee and the Poultry Diagnostic Laboratories of the State Department of Agriculture, virtually all requests for diagnosis of animal diseases were referred to those laboratories. However, a few specimens for such zoonoses as Eastern Equine Encephalitis (EEE), leptospirosis, brucellosis, anthrax, etc., which have public health significance were accepted for examination.

Diagnostic services for viral and rickettsial infections were offered on a statewide basis from the Jacksonville laboratory. The decrease in numbers of viral serology and isolation specimens was due in part to the establishment of the Encephalitis Research Center in Tampa which examined selected specimens for St. Louis Encephalitis (SLE) and other arboviruses from suspect cases in the Tampa Bay area. Close liaison was maintained between the two laboratories to avoid duplication of diagnostic procedures. Specimens found negative in the Tampa laboratory

for SLE and certain arboviruses, were examined in Jacksonville for enteroviruses and other appropriate central nervous system viruses as indicated by clinical and epidemiological history of each suspect case.

The total animals examined for rabies increased substantially during the year under review. There were 21 more positive animals in 1963 than in the preceding year. Most of the increase was noted among raccoons; however, there were 13 positive bats found also. The fluorescent antibody (FRA) procedure was used routinely to supplement the direct brain smear examination in the diagnosis of animal rabies. The Tampa Regional Laboratory and the Jacksonville Central Laboratory performed FRA procedures.

Viral and rickettsial diagnostic findings for 1221 patients examined in 1963 are given in Table 10. There were fewer positive findings largely because of the presence of the SLE epidemic in the Tampa Bay area in 1962 and the absence of SLE infections in 1963. The six SLE positive findings recorded in 1963 were obtained on cases that occurred late in 1962 and laboratory findings were completed during the year under review. The most significant virological findings during the year was in the increase in poliovirus isolations, particularly Type I. Partially as a result of laboratory findings, mass oral polio vaccine programs were stimulated in various communities in the state.

The cooperative program in the laboratory field, established between the SBH and the State Tuberculosis Board completed its eighth successful year. This arrangement has been of mutual advantage to both agencies in contributing to a better tuberculous control program in Florida. The nature and extent of the laboratory studies performed in the laboratories of each hospital are given in Table 12. A total of 45,800 bacteriological examinations were made for tuberculosis and 3945 cultures of *M. tuberculosis* were tested for drug susceptibilities. The latter information is helpful to the clinician in the management of his patient. The bacteriology laboratory performed a large number of bacteriological and mycological examinations. In the clinical laboratory sections of the tuberculosis hospitals, there was also much activity as indicated by the 23,713 hematology, 16,144 chemistry and 5606 urine examinations.

SPECIAL STUDIES

The bureau continued its active program of special studies as listed in Tables 8 and 9, indicative of the wide variety of projects with which it was concerned.

The identification of cultures belonging to the *Salmonella-arizona* family was performed. A total of 1175 cultures were typed during the year under review as compared to 823 in the preceding year and 598 during 1961. This information is useful in determining the source of an enteric infection. Excluding *S. typhosa*, there were 57 different *Salmonella* types found in Florida during 1963. There were at least three major food poisoning outbreaks in Florida due to three different *Salmonella* types, viz. *montevideo*, *enteritidis* and *oranienberg*. The bureau participated in a nationwide *Salmonella* surveillance program by furnishing

listings of the *Salmonellae* typed in the laboratory each week to the USPHS Communicable Disease Center (CDC) in Atlanta. The ubiquitous nature of the *Salmonella* group is being recorded with the hope that patterns spread of infections may suggest control methods which are not readily apparent.

Diarrheal disease studies supported by a contract with the Armed Forces Epidemiological Board (AFEB) of the U. S. Department of Defense were carried out in the Miami laboratory. It was concerned with a study of shigellosis as a cause of diarrheal disease and the therapeutic and prophylactic effect of a concomitant lactobacillus infection in the intestinal tract on the cause of the shigellosis. Preliminary observations suggest the potentiality of utilizing the marmoset monkey as a test animal for the study of experimental *Shigella* infections.

Enterovirus sewage studies were performed in the Jacksonville and Miami laboratories. Both involved collections of weekly specimens from sewage systems and examinations for the presence of polio and other enteroviruses. The Jacksonville laboratory received specimens from Manatee, Hillsborough, Palm Beach, Duval, Leon and Escambia Counties. The Miami laboratory examines those specimens collected in Dade County only. Numerous enteroviruses, particularly ECHO and Coxsackie were found during the summer months. Indications of the presence of poliovirus Type I was found in the Jacksonville area prior to a Type I outbreak in August. The statewide project was terminated in December at the end of the two-year period for which it was planned. The Miami project will be completed early in 1964. Enterovirus surveillance, based on poliovirus isolations from sewage systems have become increasingly less meaningful because of the widespread continuing use of the live oral polio vaccine in Florida. Since it is impractical to differentiate vaccine strains from wild virus, sewage isolations have become less dependable as a system to determine the circulation of wild polioviruses in the community.

A separate poliovirus surveillance study was completed in Hillsborough County following the mass feeding of oral trivalent polio vaccine early in 1962. Rectal swabs were collected at monthly intervals from children in selected day nurseries. Poliovirus was undetected in the community for approximately 12 months after the completion of the mass oral vaccine program but it became detectable after this period.

Fluorescent antibody (FA) examinations for rabies, syphilis serology and Group A streptococcus grouping have become more or less routine in the laboratory. However, because this procedure is relatively new, it remains an area for special studies, particularly as it may apply to other procedures. For example, the FA procedure for the diagnosis of *N. gonorrhoea* in females continued as a special study in the Jacksonville laboratory. The local VD and prenatal clinics in Jacksonville cooperated in supplying appropriate specimens for the study from which there were preliminary findings to indicate the usefulness of this test. The FA procedure appeared to be more sensitive and more specific than the cultural technic. It would lend itself to mailed specimens if clinic personnel were willing to inoculate the culture media, incubate it overnight and prepare

a microscopic smear from the resultant growth. The smear could be mailed to Jacksonville for subsequent FA examination. Obviously, the preliminary procedures are somewhat cumbersome for clinics to perform on a routine basis. It could be used, however, in special situations where more intensive workup of suspect gonorrhea is indicated.

Studies of rabies in bats in wildlife have been supported by a USPHS research grant for the past nine years. The current year was the last of the present grant and the activities consisted mainly of closing out the grant. Further USPHS support was not requested since the public health interest in rabies in wildlife would require an experienced biologist to carry field and laboratory studies and the former one has been transferred to the Encephalitis Research Center in Tampa. Continued interest in this problem will be maintained and will largely consist of surveillance for wildlife rabies as part of the routine laboratory service of the bureau.

Examinations of mosquitoes and tissues collected in the Tampa Bay area were carried out in Jacksonville until facilities at the Encephalitis Research Center became available. Collections of mosquitoes were made during the winter of 1962 and tested for arboviruses in suckling mice in Jacksonville during the first quarter of 1963. No isolations were made from these collections.

Late in 1962, funds were obtained from the USPHS in support of a study to determine the usefulness of the Sabin-Feldman Toxoplasmosis dye test in the diagnosis of chronic eye disease. During 1963, the dye test procedure was established in the Jacksonville laboratory and the service was made available to ophthalmologists and other interested clinicians. A total of 150 specimens were examined and findings reported. Preliminary findings seem to indicate that dye test results are difficult to interpret because of the widespread presence of toxoplasmosis dye test antibodies in apparently healthy adults. In addition, the absence of antibodies may not necessarily rule out *Toxoplasma gondii* as the etiologic cause of chronic uveitis and/or chorioretinitis. The fluorescent antibody procedure was also investigated as a diagnostic aide in toxoplasmosis infections. This study was carried out in cooperation with CDC in Atlanta.

Studies of the unclassified mycobacteria were continued under the guidance and direction of the Division of Epidemiology. (See Division of Epidemiology elsewhere in this Report). However, some additional information regarding the comparison of cultural findings of *M. tuberculosis* and unclassified mycobacteria by laboratory during 1963 is provided in Table 11. A total of 42,829 specimens were examined in the state laboratories. Four per cent were found to be positive for *M. tuberculosis* and 1.6 per cent positive for the unclassified mycobacteria. Most interesting was the variation in percentage positive of cultures submitted to laboratories in different areas of Florida. Specimens from patients in the southern part of the state served by Lantana and Miami laboratories yielded 4.2 and 4.9 per cent positive *M. tuberculosis* cultures as compared to 3.7 and 3.4 per cent positives in Jacksonville and Tallahassee laboratories, respectively. Considering isolation rates of unclassified mycobacteria, Tallahassee, which served the panhandle area west of Jefferson County, yielded only 0.7 per cent positives as compared to 1.5 per cent or

greater yields in the remaining state laboratories. No ready explanation for these differences was apparent. Since uniform cultural procedures and culture media were made available in all of the laboratories concerned, the apparent differences in isolation rates may be attributed to other variables.

Limited airborne pollen studies were carried out during 1963 in order to fill in certain gaps left in a 1961-62 study. Seasonal trends of three allergenic (ragweed, oak and grass) pollens were determined. Continuing studies do not appear indicated; this type of study needs to be done intermittently, possibly at five or 10 year intervals.

The demonstration of a fat soluble toxin in oysters similar to that which produces paralytic shellfish poisoning on the Pacific Coast of the United States resulted in special studies being carried out to determine the nature and extent of this toxin in Florida oysters. A total of 444 samples were tested and reported to the appropriate CHD submitting samples. Oyster growing areas were approved only after negative tests were obtained.

CONSULTATIVE AND EDUCATIONAL SERVICES

Technical and consultative guidance was provided to eight medical technologists, one pathologist, eight sanitarians and water plant operators, two classes of student sanitarians and three medical visitors from foreign lands. High school and college students were provided orientation tours of the laboratories in cooperation with local hospitals and nearby educational institutions.

In accordance with an earlier cooperative arrangement between the Graduate School and the Department of Bacteriology of the University of Florida, a candidate for the Ph.D. degree was provided with a course in public health microbiology (BCY650) given in the Jacksonville laboratory. This course is open to graduate students interested in a career in the public health laboratory.

A total of 23 additional clinical laboratories was approved to perform standard serological examinations for syphilis for premarital and prenatal patients. There was a total of 283 approved laboratories as of the close of 1963.

The bureau carried out the registration of 59 medical laboratories and assisted the Board of Examiners in the Basic Sciences to license 441 medical technologists and 140 medical technologist directors as provided by Chapter 483 of the Florida Statutes 1955.

Continuing visits and inspections were made to 26 commercial and public health dairy laboratories to certify performance of bacteriological and related tests in accordance with Standard Methods and USPHS requirements for interstate shipment of milk.

During 1963, the USPHS promulgated a policy of certification of water laboratories which test drinking water for interstate carriers in accordance with the 1962 Public Health Service Drinking Water Stan-

dards and the Interstate Quarantine Regulations. In accordance with this policy, triennial certification of the SBH laboratory by the USPHS and like certification of sublaboratories by the state laboratory are required. This new responsibility resulted in the inspection and certification of the drinking water testing section of the Jacksonville laboratory by the USPHS. In turn, the senior sanitary bacteriologist performed certification of water testing procedures performed in six regional public health laboratories, five county laboratories and seven municipal water plant laboratories within the state.

Close technical cooperation was maintained with several federal laboratories. CDC carried out a technical and administrative program review of this bureau and made pertinent recommendations as to the rearrangement of services in order to minimize nonproductive services and test procedures. Implementation of these recommendations was initiated and will be carried out subject only to budgetary limitations and overall SBH policies. The Robert A. Taft Sanitary Engineering Center performed technical program reviews of the milk and water testing sections of the Bureau of Laboratories to assure compliance with the uniform procedures recommended in Standard Methods as published by the American Public Health Association. The Venereal Disease Research Laboratory of the USPHS reviewed the syphilis serology procedures in the Jacksonville, Pensacola and Tallahassee laboratories. All of these reviews were made on invitation from the SBH as part of the continuing interest in maintaining the highest levels and standards of proficiency in laboratory procedures. It is on this basis that the bureau attempted to provide similar consultative guidance to local governmental and private laboratories within the state.

A total of four members of the laboratory staff took training and refresher courses in fluorescent antibody procedures, syphilis serology, toxoplasmosis serology and virology.

Revision 1963 of previously published list of Laboratories approved for Premarital and Prenatal Serology:

ADDED

Brevard Hospital Laboratory, Melbourne
 Doctor's General Hospital Laboratory, 6701 W. Sunrise Boulevard, Plantation
 Duval Medical Center Laboratory, Jacksonville
 Fred I. Dorman, M.D., Medical Arts Building, 1417 Lakeland Hills Boulevard, Lakeland
 Eustis Clinic, 201 Magnolia Avenue, Eustis
 Hernando County Hospital Laboratory, 100 S. State Road 700, Brooksville
 Drs. Horton and Raulerson, Osceola and 10th Avenue, Okeechobee
 Dr. James B. Leonard's Laboratory, 1201 S. Highland Avenue, Clearwater
 Martin General Hospital Laboratory, Stuart

Medical Arts Laboratory, 2321 Espanola Way, Melbourne
 1333 Medical Laboratory, 1333 S. Miami Avenue, Miami
 Mt. Dora Clinic, Mt. Dora
 Northwest Hospital Laboratory, 1060 N.W. 19th Street, Miami
 Pembroke Medical Laboratory, 6449 Pembroke Road, West Hollywood
 Dr. Phillips' Memorial Hospital, 2500 W. Church Street, Orlando
 St. Joseph's Hospital Laboratory, Port Charlotte
 South Miami Hospital Laboratory, South Dixie Highway at 62nd Avenue, Miami
 Darrell L. Vaughn, M.D., The Cove, Deerfield
 Venice Hospital Laboratory, Venice
 George E. Weems Memorial Hospital Laboratory, Apalachicola
 Winter Park Medical Laboratory, 157 N. Lakemont Avenue, Winter Park
 G. Pierce Wood Memorial Hospital Laboratory, Arcadia

REMOVED

Anderson Medical Clinic, 61½ 2nd Street, Hialeah (Deceased)
 Clermont Clinical Laboratory, 676 Montrose, Clermont
 Luverne Domeier, M.D., 149-1st Ave. N., St. Petersburg
 Lake Alfred Medical Center, Box 1295, Lake Alfred
 Little River Medical Laboratory, 8340 N.E. 2nd Avenue, Miami
 Mercywood Hospital Laboratory, US 1 South Federal Highway, Hollywood
 North Florida Medical Laboratories, 1648 San Marco Boulevard, Jacksonville

TABLE 8
EXAMINATIONS PERFORMED BY THE STATE BOARD OF HEALTH LABORATORIES, FLORIDA, 1963

Examination	Jacksonville	Tampa	Miami	Pensacola	Tallahassee	Orlando	West Palm Beach	Pinellas County	Franklin County	Jefferson County	TOTAL
GRAND TOTALS.	935,407	642,612	577,260	158,529	139,714	170,757	132,523	45,781	3,936	5,462	2,811,981
SEROLOGY											
Syphilis.	397,881	382,992	372,882	87,153	56,951	59,829	53,850				1,411,538
Agglutinated & related tests.	1,903	181	963	31	73	80	34			34	3,299
Blood typing (Rh).	4,696	4,340	3,154	1,678	704	446	981			195	16,188
DIAGNOSTIC BACTERIOLOGY											
Diphtheria & associated infections.	8,791	1,743	1,725	32	2	190	15				12,438
Tuberculosis.	84,197	19,123	19,123		7,010		9,859				120,189
G.C.—Smear.	16,810	23,700	21,214	5,610	10,384	2,440	744				80,902
G.C.—Culture.	487	15,931	4,751	2,788	9,313						26,270
Enteric.	78,546	61,010	17,520	9,520	24,782	31,696	1,072				224,146
Blood culture.	536		32	144	88	236	376				1,472
Leptospirosis.	598										598
Miscellaneous.	85,503	15,653	3,951	620	316	14,779	2,484			3,378	126,684
SANITARY BACTERIOLOGY											
Dairy products.	20,370	45,474	24,828	14,262	13,872	11,070	22,308				164,796
Water, drinking & pools.	28,696	39,672	27,240	11,450	11,134	19,606	25,660		984		183,914
Pollution surveys.	18,400	13,810	11,595	5,585	575	9,790	7,935		2,140		83,000
Food (sanitary quality tests).	2,735		1,197	105	224	336		35			8,444
Food poisoning.	792	180	960	168	12	622	30				2,764
Utensils.	212	187	6			1,247					1,652
DENTAL CARES BACTERIOLOGY	5,832										5,832
PARASITOLOGY											
Intestinal parasites.	50,405	23,949	11,936	12,285	9,873	11,975	4,345			36	124,804
Malaria.	36	38	20		6		12			2	114
MYCOLOGY	15,642	54	207		18	606	141				16,668
CHEMISTRY											
Blood.	11,507	9,428	980	6,696	1,177	413	2,559			1,610	34,370
Spinal fluid.	814		99	6	20		1			940	1,476
Urine.			39			13	217			207	3,028
Toxicology & narcotics.	1,880		1,148								65
Drugs & cosmetics.	3,309		262								3,726
Water.								155			155
Other.	2,619		7,656					117			10,392

TABLE 8 (Continued)
EXAMINATIONS PERFORMED BY THE STATE BOARD OF HEALTH LABORATORIES, FLORIDA, 1963

[illegible]

TABLE 9
SPECIMENS SUBMITTED TO STATE BOARD OF HEALTH
LABORATORIES FOR EXAMINATIONS BY FINDINGS,
FLORIDA, 1963

EXAMINATION	Number of Specimens			
	Positive Specimens		Negative	Unsat.
	One or More Positive Findings	Positive for Findings Indicated		
SEROLOGY				
Syphilis.....	40,158		680,777	10,815
Agglutinated & related tests.....	494		2,311	131
Typhoid.....		128		
Typhus.....		2		
Brucellosis.....		19		
Tularemia.....		8		
Heterophile.....		363		
Other.....		11		
Blood typing (Rh).....				15,596
DIAGNOSTIC BACTERIOLOGY				
Diphtheria & associated infections.....	1,974		3,258	1
C. diphtheria.....		65		
Vincent's.....		47		
Streptococci.....		901		
Other.....		1,290		
Tuberculosis.....	2,491		40,081	2,485
Sputum.....		2,228		
Aerosol.....		149		
Urine.....		12		
Gastric.....		65		
Other fluids & exudates.....		30		
Animal inoculations (G.P.).....				6
Gonorrhea—Smears.....	23,042		17,409	239
Intracellular Gram negative diplococci.....		6,254		
Extracellular Gram negative diplococci.....		353		
Trichomonads.....		4,035		
Yeasts.....		2,114		
Vincent's organisms.....		285		
Many pus cells.....		11,228		
Gonorrhea—Cultures.....	1,307		23,656	426
Enteric infections.....	1,275		52,849	115
S. typhosa.....		105		
Other Salmonella.....		867		
Shigella (flexneri & sonnei).....		164		
Other.....		82		
Blood cultures.....	25		159	2
Brucella.....				
Other.....		30		
Leptospirosis.....	7		590	1
Miscellaneous.....	12,193		5,281	48
Darkfield—T. pallidum.....		64		
Chancroid—Ducrey's.....		4		
Granuloma—Donovan bodies.....		12		
Gonococcus in eye.....		16		
Other eye smears.....		129		
Other eye cultures.....		64		
Urine cultures.....		901		
Other fluids & exudates.....		4,225		
Mycological examinations.....		1,680		
Organisms for identification.....		2,129		
Sensitivity testing.....		389		
Other examinations.....		1,725		
Miscellaneous special services.....		855		
SANITARY BACTERIOLOGY				
Dairy products.....				27,485
Water, drinking & pools.....				91,957
Water, pollution surveys.....				16,689
Foods (sanitary quality tests).....				1,229
Food poisoning.....				439
Utensil swabs.....				1,653

TABLE 9 (Continued)
SPECIMENS SUBMITTED TO STATE BOARD OF HEALTH
LABORATORIES FOR EXAMINATIONS BY FINDINGS,
FLORIDA, 1963

EXAMINATION	Number of Specimens			
	Positive Specimens		Negative	Unsat.
	One or More Positive Findings	Positive for Findings Indicated		
DENTAL CARIES BACTERIOLOGY				3,053
PARASITOLOGY				
Intestinal parasites.....	21,344		103,460	1,432
Hookworm.....		6,144		
Ascaris.....		5,481		
Enterobius.....		3,703		
Trichuria.....		1,883		
Other helminths.....		86		
E. histolytica.....		134		
Nonpathogenic amoeba.....		4,407		
Flagellates.....		3,008		
Other.....		33		
Malaria.....			57	8
CHEMISTRY				
Blood.....				32,794
Spinal fluid.....				542
Urine.....				476
Water.....				1,292
Toxicology & narcotics.....				1,710
Drugs & cosmetics.....				7
Other.....				10,392
Radiological chemistry				
Water (ground & precipitation).....				685
Air.....				1,058
Milk (Srm., Cem., Inn., etc.).....				241
Other.....				160
VETERINARY PUBLIC HEALTH				
Leptospirosis.....	12		93	10
Other.....	36		62	1
VIRAL SEROLOGY				
Hemagglutination-inhibition.....				12
Neutralizations.....				85
Complement-fixation.....				6,944
VIRAL ISOLATIONS (except rabies)				1,508
Rabies (microscopic).....	93		2,854	18
Dog.....		3		
Cat.....		1		
Fox.....		3		
Horse.....		1		
Raccoon.....		65		
Skunk.....		5		
Bat.....		13		
Wildcat.....		2		
Mouse inoculations.....				880
SPECIAL PROJECTS				
Salmonella typing.....				1,175
Diarrheal disease studies (AFEB).....				3,793
Enterovirus sewage studies.....				12,988
Polio surveillance.....				626
Fluorescent antibody—gonococcus.....				2,126
Wild animal (rabies).....				37
Arthropod-borne virus isolations				
Mosquitoes.....				359
Toxoplasmosis dye test.....				150
Unclassified mycobacteria.....				124
Airborne pollen studies.....				75
Toxin in oysters.....				444
TOTAL				1,291,864

TABLE 10
STATE BOARD OF HEALTH LABORATORIES, FLORIDA
VIRAL AND RICKETTSIAL DIAGNOSTIC FINDINGS, 1963

Tests	Positive	Negative	Total
Lymphocytic choriomeningitis	1	180	181
Mumps	26	332	358
Eastern encephalomyelitis		317	317
Western encephalomyelitis		262	262
St. Louis encephalitis	6	249	255
Herpes simplex	3	63	66
Poliovirus type 1	25	322	347
Poliovirus type 2	1	346	347
Poliovirus type 3	2	344	346
Measles	2	25	27
Vaccinia-variola		14	14
Murine typhus		32	32
Rickettsialpox—Rocky Mt. spotted fever		53	53
Q fever		29	29
Influenza A	30	116	146
Influenza B		157	157
Parainfluenza 1 & 3		145	145
Respiratory syncytial		2	2
Psittacosis—LGV	1	67	68
Adenovirus		151	151
ECHO types 3, 4, 6, 7, 8, and 9	20	320	340
Coxsackie types A9 and B6	9	339	348
Other—Undetermined viral agent(s)	6	143	149
TOTALS	132	4,008	4,140*

* 1221 Patients examined.

TABLE 11
COMPARISON OF CULTURAL FINDINGS FOR M.
TUBERCULOSIS AND UNCLASSIFIED MYCOBACTERIA
BY STATE BOARD OF HEALTH LABORATORY,
FLORIDA, 1963

Laboratory	Specimens Examined	Positive M. tuberculosis		Positive Unclassified Mycobacteria	
		Number	Per cent	Number	Per Cent
Jacksonville	30,064	1,141	3.7	467	1.5
Tallahassee	2,549	88	3.4	17	0.7
Lantana	2,950	126	4.2	76	2.5
Miami	7,266	361	4.9	114	1.5
TOTAL	42,829	1,716	4.0	674	1.6

TABLE 12
EXAMINATIONS PERFORMED IN TUBERCULOSIS
HOSPITAL LABORATORIES*, FLORIDA, 1963

	Tampa	Lantana**	Tallahassee**	Totals
Totals—excluding special studies	48,080	30,429	26,959	105,468
Tuberculosis				
Diagnostic	18,378	14,750	12,672	45,800
Drug susceptibility	2,166	858	921	3,945
Mycology	499	102	127	728
Miscellaneous bacteriology	1,523	1,873	4,978	8,374
Hematology	11,553	6,644	5,516	23,713
Chemistry	10,071	4,580	1,493	16,144
Urine analysis	3,103	1,595	908	5,606
Other	787	27	344	1,158
Special studies and reference tests:				
Unclassified mycobacteria (human)	5,461			
Tween 80 degradation tests	259			
Unclassified mycobacteria (soil)	164			
Silica mouse inoculation studies	65			
BCG immunization studies	100			
Other limited studies	471			

* Operated under direction of Bureau of Laboratories; budgetarily supported by State Tuberculosis board.

** Combined regional public health and hospital laboratories.

BUREAU OF LOCAL HEALTH SERVICES

L. L. Parks, M.D., M.P.H.
Director

Hubert U. King, M.D.
Assistant Director

The major responsibilities and functions of the bureau remained essentially the same during 1963 as in the past. Foremost among these responsibilities was the continued supervision of the 67 county health departments (CHD) and the coordination of their public health programs.

The bureau is administered by a director and assistant director with the assistance of a small clerical staff. Included are the Division of Sanitation, Division of Nutrition, Accident Prevention Program and the Civil Defense-Health Mobilization Program. In addition, the bureau has a staff of consultants who provide clerical consultation to the counties. The Division of Public Health Nursing, formerly a part of the bureau, was detached during the year and placed directly under the State Health Officer for an extensive evaluation of this program.

Recruitment of well qualified personnel continues to be of vital concern. Recruitment of professional workers is still a major problem although salary levels have improved, more state and local funds are available, and an active recruitment program has been pursued.

The bureau has played an active role in providing and stimulating both in-service and postgraduate training for professional staff members in cooperation with the Coordinator of Training and other bureaus and divisions. Orientation of new health officers and the training course for sanitarians are a direct responsibility.

Major activities include consultation on general administrative problems; assistance to county health officers in the preparation of budgets and budget control; assistance in the recruitment of personnel, processing of personnel papers and training of new employees; assistance in local program planning and evaluation; and coordination of programs over the state in cooperation with other bureaus and local staffs.

CLERICAL SECTION

The activities of this staff were limited due to staff vacancies and the assignment of one consultant full-time to the Civil Defense-Health Mobilization Program. Included were consultation to CHD staffs in matters relating to the processing of personnel papers; financial records and procedures including budgets, bookkeeping, etc.; general records procedures; vital statistics; and orientation of new clerical staff members. Special assignments included assistance in the Civil Defense Program; assistance in the establishment of records and office procedures for the Encephalitis Research Center and assistance in the establishment of one Mental Health Guidance Center. Nineteen counties were visited to give consultation on clerical procedures during the year. During 1963, there

were some 310 clerical personnel on CHD staffs in addition to 50 clerical workers on special programs.

COUNTY HEALTH DEPARTMENTS

No major change was made in the organizational pattern of county health units during the year. Each of the 67 counties had a CHD providing basic public health services to every part of the state. There were 25 single county departments; nine bi-county units; and eight tri-county units — for a total of 42 county health units.

In addition to providing basic services such as immunizations and communicable disease control, maternal and child health programs, school health programs, health education, chronic disease programs, environmental sanitation programs, maintenance of vital records, and laboratory services — 1963 saw the expansion of the immunization program to include intensive follow-up of newborn children; significant expansion of the home nursing care and chronic illness and aging programs; intensification of services and programs in environmental health relating to air and water pollution, industrial health, accident prevention, etc.; civil defense program activities increased with inventory of some 35 civil defense emergency hospitals and increased interest in training courses; and continued attention to the health and welfare problems of agricultural migrant workers and Cuban refugees.

Some 68 physicians were employed full-time in CHDs during the year. Four local directors resigned and one director transferred, and four new directors appointed. At the year's end there were three vacancies for local directors in the state. Five public health residents received approved training during the year. One health officer completed postgraduate training leading to the Master of Public Health Degree.

Staffing and Financing: (See reports of Bureau of Finance and Accounts and Division of Personnel elsewhere in this Report). As of December 31, 1963, there were 1761 employees on the staff of CHDs and budgets totalled \$10,818,523 for fiscal year 1963-64. Of this amount, \$7,405,777 was from local contributions; \$2,174,397 from state funds; \$931,000 from federal funds; and \$307,349 came from the CHD budgeted reserve. The 1963 Legislature approved an increase of \$750,000 for the biennium 1963-65 — or \$375,000 per year. This increase in state funds, the first in several years, helped to alleviate the increasing problem of financing CHD program growth.

Health Center Construction: New headquarters centers were completed in the following counties: at Ocala (Marion); Ft. Pierce (St. Lucie); and Cross City (Dixie). Auxiliary health centers were also completed or obtained at Interlachen (Putnam); Boca Grande (Lee); and Chattahoochee (Gadsden). Construction was begun on the new headquarters center for Gadsden County at Quincy. In addition, plans were approved for the construction of new headquarters centers at Rockledge (Brevard) and Ft. Lauderdale (Broward). Auxiliary center plans were approved for new health centers at Melbourne and Titusville (Brevard) and Yulee (Nassau). Additions to existing health centers were approved for the Alachua CHD and Manatee CHD.

HIGHLIGHTS OF LOCAL PROGRAMS

Table 14 will give a complete statistical report of CHD activities indicating the number and type of various services provided by CHDs. However, the following summary will present some of the more unusual or outstanding program developments in the CHDs:

Alachua — In July the Mental Health Division of the Alachua CHD began a Rotating Internship Program in cooperation with the University of Florida Health Center and University of Florida Infirmary (Psychology Service) supported by a grant obtained by the Health Center. This is in addition to the joint program of training for psychology students which has been in effect for the past several years . . . The Board of County Commissioners appropriated \$50,000 in their 1963-64 budget for construction of an annex to the rear of the present health department building which will permit additional space for the Mental Health and Public Health Nursing Sections. The mental health facilities are planned to function as part of a "Community Mental Health Center" which will operate cooperatively with the Psychiatric Unit of the Alachua General Hospital, now under construction . . . The Child Spacing Program of the CHD successfully entered its second year of operation. Patients are routinely given a pelvic examination and Pap smear. The program has been well received by patients and private physicians and it is expected that through the assistance of local physicians the program will be expanded during the coming year.

Baker — Made significant progress in the area of environmental sanitation with addition of a sewage treatment plant at the Olustee National Park; improvement of school cafeterias and sewage disposal systems; and improved garbage disposal services at Glen St. Mary . . . With the assistance of one of the local doctors incorporated cytology and child spacing programs into the maternal health program . . . Reports great success in the communitywide oral polio vaccine program with 95 per cent of the population immunized with Type I vaccine . . . Began dental screening and treatment in cooperation with State Board of Health (SBH) Bureau of Dental Health on the first three grades in the schools in addition to selected high school students . . . In cooperation with school officials conducted health education programs on venereal disease in selected schools and on the effects of smoking among high school students . . . The home nursing program continues to develop with good community support . . . Worked with a group of women volunteers in providing assistance and educational programs for low income families.

Brevard — The CHD broke through its "space barrier" in 1963 with the approval of three new health centers to meet the skyrocketing needs. Within the next two years there will be three well equipped health centers at Rockledge, Titusville and Melbourne, at a cost of over \$500,000. Land has been donated for the Rockledge Center, which will cost about \$300,000. The Melbourne and Titusville Centers will cost about \$125,000 each and it is expected that land will be donated for them also. The lack of adequate space entered into many of the CHD projects for the year, slowing some, deferring others until a location for equipment and people could be found. The mental health program is an

example. There was no place to put personnel. The School Board provided space at the old Brevard Junior College building and offices in that building have been remodeled. The mental health staff now consists of two psychologists, a clinical psychiatric worker, a mental health worker and two secretaries. At present, program activities are limited to children. Water came under considerable surveillance by the CHD during the year. As a result of thorough sampling of the Indian River, its eastern half is now approved for swimming and oyster harvesting for the first time. The CHD is now awaiting approval from the SBH for the river's western half. When SBH approval is secured, it is expected that an entire new industry for Brevard County will be developed. To accomplish the systematic sampling an extra man was employed and a boat was purchased for his use. With the construction of new facilities, it is expected that laboratory samples, now being run in Jacksonville by the SBH, will be done locally . . . The CHD took a long stride in 1963 toward lessening the problem of sewage disposal. A sewage control program was begun soon after the State Legislature passed an act permitting the program. Large area franchises will be available to investors in sewage treatment facilities. The county has already issued several such franchises. There are presently about 30 sewage treatment plants in the county and it is expected that eventually this number will be reduced to 10 or less. Fewer and larger plants will be much more efficient and better regulated as well as more profitable for investors. Within four years, sewage facilities should be available for every foot of land suitable for home building in Brevard County. Regulations from the CHD governing sewage plant operation are now in the hands of the County Commissioners and are expected to be acted on early in 1964.

Broward — The County Commissioners approved a \$270,000 building program which will provide a new CHD building to be located in southwest Fort Lauderdale. All first grade children were offered skin tests for tuberculosis. Where the tuberculosis rate appeared unusually high in a given school district, intense casefinding was pursued in that area. X-ray services have been doubled with the purchase of a second 70mm X-ray unit. With the two X-ray machines, it is expected that the number of chest X rays taken will be approximately 100,000 a year . . . An intensive survey of first grade children in low socioeconomic areas and in control areas was conducted to determine the extent of intestinal parasite infestation in the county . . . Broward County's first community psychiatrist began his duties during the year. Working under the guidance of the psychiatrists in the community in cooperation with the CHD, he is working with the two main hospital districts and the Henderson Clinic to provide care for indigent patients . . . For the past 10 years the CHD has been advocating better garbage and rubbish disposal in the community. During 1963 the Board of County Commissioners made application for assistance through the Federal Public Works Program for the construction of three incinerators in the county. Approval was granted for construction of two 300-ton per day incinerators at a cost of \$2.5 million. These modern incinerators will serve several small municipalities as well as unincorporated areas of the county. Several undesirable dumps will be eliminated.

Collier — The Visiting Nursing Program operated by the CHD, which began in the Naples area in 1962 at a slow pace, gained significant momentum during 1963 and is now accepted by the community as an essential service . . . X-ray equipment costing some \$2000 was donated to the CHD by the Collier County Tuberculosis and Health Association . . . Plans were completed to do routine serological tests for syphilis and chest X rays on all prisoners confined in the county jail.

Dade — The Metropolitan Dade County Commission approved the construction of two new health centers, the North Miami and Miami Beach Health Centers. . . . The commission also adopted a Pollution Control Ordinance creating a Pollution Control Board with provision for a staff of professional workers. A Pollution Control Section will be established as part of the organization of the Dade County Department of Public Health (CDPH) with the Pollution Control Officer being appointed by the County Manager . . . Approximately 15,000 children from 55 public schools were examined during the "crash program" from October-December. Under the direction of the CDPH, physical examinations were provided for all first and seventh grade children and those screened from other grades who were unable to receive this service through a private physician. Follow-up of defects will be done by the public health nursing staff . . . The U.S. Public Health Service (USPHS) awarded a grant of \$150,000 to the University of Miami School of Medicine to investigate the use and effects of insecticides in Dade County. The CDPH will assist in this study and conduct the epidemiological studies . . . The CDPH was awarded \$69,574 by the USPHS for a comprehensive health care project to improve health conditions of migrant farm workers and their families. Four clinic centers will be established in the farming areas of the county to carry clinical, nursing and sanitation services to the migrant, rather than offering these services at inaccessible or distant points . . . An intensive program, made possible by the USPHS Vaccination Assistance Program, is being developed to promote immunizations for infants and other preschool children . . . The CDPH assumed total responsibility for medical aspects of the Conservation of Hearing Program. Qualified audiometrists from the CDPH conducted screening examinations in the schools and promoted effective follow-up of defects through close cooperation with the School of Medicine, Jackson Memorial Hospital, local school officials, and private ear, eye, nose and throat physicians. . . . Intensive health education programs for Cuban refugees continued and have been well received. Directed by the CDPH with active participation by voluntary groups and Cuban physicians, the programs have focused on such topics as heart disease, cancer, diabetes, etc. . . . A total of 136 Miccosukee Indians received a variety of screening tests during a two-day clinic provided by the CDPH, USPHS, SBH and U.S. Bureau of Indian Affairs. Intensive follow-up of defects and correction was provided where indicated . . . The CDPH conducted a "seat belt campaign" for its employees. Some 346 belts were purchased by employees.

Escambia — A survey of all dental and medical X-ray equipment was made during the year. Many of these machines did not have adequate collimation or filtration. A resurvey of dental machines showed that

all machines had been adjusted to conform to SBH recommendations . . . The CHD, at a cost of some \$6500, purchased radio communication equipment for the sanitation staff. This provides direct radio communication between all sanitarians and the office making the program highly flexible with more rapid and efficient service to the public . . . During the 1963 legislative session, a special local act for Escambia County was passed covering the inspection of all natural gas and liquefied petroleum gas installations. The Board of County Commissioners put the program into effect in October with supervision of the program being the responsibility of the CHD. Thereby all inspection services of the county—plumbing, electrical, gas installations and environmental sanitation — are now under the direction of the CHD . . . The planned parenthood program of the CHD has been in operation one year. Patients counseled and cared for are the indigent or semi-indigent who cannot afford private care. Initial contact is usually made through the maternity and well baby clinics. Some are referred by the nursing staff. At the close of the year, some 270 patients were registered in this clinic. Over 22,500 units of medicine were dispensed. The number of patients seen in the clinic has been steadily increasing each month.

Flagler — The home nursing program gained momentum during the year . . . The dental program continued to render needed services in the county. This county shares a dental preceptor and dental assistant with Putnam County . . . The mental health program was given added attention with the assignment of another part-time mental health worker to the unit.

Gadsden — After 28 years in inadequate and cramped quarters, construction was begun on a new \$97,500 health center at Quincy which will serve as headquarters for the CHD staff. New quarters were secured at Havana for the auxiliary center there last year and the auxiliary quarters at Chattahoochee have been remodeled . . . Organization of the home nursing care program was completed and a new public health nurse was added to the staff . . . During the latter part of the year a local physician was employed on part-time basis to assist the health officer in the clinical program . . . During the summer in connection with the SBH Summer Student Training Program, a home economics student and physician were assigned to the county to study the nutritional status and needs of prenatal patients . . . A study of the reasons for school "drop-outs" was begun by the summer students which has been continued by the regular staff . . . Increased emphasis was placed on the planned parenthood program.

Highlands-Glades-Hendry — Through a Maternal and Child Health (MCH) grant, a nutritionist was assigned to this health unit on a special project to study the nutritional needs of a rural community. Objectives of the program are to determine community needs in this area; to establish a baseline of the existing nutritional status of its citizens; to explore ways of meeting the needs; and to evaluate the effectiveness of such a program in a predominantly rural area. Highlands CHD — Construction was begun in December 1963 on new health department quarters to be located in the new courthouse annex which is to cost some \$179,000

... Conducted an intestinal parasite survey in selected areas with follow-up and educational programs directed at the families in these areas. The home nursing care program is progressing slowly but it is felt community interest is increasing.

Hillsborough — Because of the outbreak of viral encephalitis in the Tampa Bay area in 1962, the CHD conducted an extensive community education program for the eradication of mosquitoes. Known as "Fite the Bite" program, every avenue of public education was used — radio; TV; newspapers; information to employee groups, civic clubs, churches, schools, etc.; bumper stickers; fliers were distributed through the CHD, food stores, and various other businesses; employee bulletins and church bulletins carried educational material; the medical and dental societies pledged their support and distributed fliers . . . Continued the infant immunization program with an immunization reminder card system using birth certificates to secure basic information . . . Working with the SBH Heart Disease Control Program staff completed a survey on the incidence of acute rheumatic fever and acute glomerulonephritis; collected urines for 5-methoxy tryptamine survey on rheumatic fever cases; and began a rheumatic fever incidence survey in high schools . . . Assisted the Encephalitis Research Center in clinical viral surveillance in the county . . . As a participating agency in the program for rehabilitation of stroke patients at the county hospital proved the efficacy of rehabilitation in that 64 per cent of the patients admitted returned home ambulatory as compared with 32 per cent in 1962. Follow-up rehabilitation nursing services in the home were provided by the CHD.

Jefferson — The Demonstration Health Profile Screening Program was begun by the CHD in February. This long awaited program has been in the planning stages for several years and is a cooperative undertaking between the CHD, local physicians, Division of Chronic Diseases of the SBH and Healthways, Inc. Stated objectives of the program are to offer multiple health screening tests to the public; refer positive screenees to the family physician; and to promote health education and encourage regular health examinations. Included among the procedures are history; height and weight; blood pressure; test for venereal disease, blood sugar and cholesterol; visual testing; tonometry; hearing test; hemoglobin; urinalysis; feces for intestinal parasites and blood; chest X ray; tuberculin skin test; electrocardiogram; and Pap smear. Even though the program has only been in operation a short while, a number of physical defects have been discovered and referred for treatment.

Lee — The staff of the CHD spent a great deal of time on the civil defense program during the year. Medical self-help courses were taught to various community groups by members of the CHD staff. The County Commissioners provided space for the storage of a Civil Defense Emergency Hospital. Blueprints of five large buildings in various parts of the county were made and plans were laid for the possible use of these buildings as hospital sites in a civil defense emergency. The countywide disaster plan for civil defense was completed with the exception of minor details. The director of the CHD wrote a disaster plan for the local hospital for emergencies other than civil defense or hurricanes . . . With the support

of the local medical society, a program to develop stronger regulations for stray dogs and the registration and inoculation of these animals was planned. Such plans should lead to a more effective rabies control program . . . The CHD held two mass 70mm X ray clinics during the year. . . . Pollution of area waters continued to be of concern to the CHD staff. Ft. Myers is constructing a secondary sewage treatment plant which should materially reduce pollution of the Caloosahatchee River.

Manatee — Plans were approved for the addition of a new wing to the present CHD building. Construction of this wing will increase the present 4500 to 6500 square feet at a cost of \$20,000. New offices for the director, mental health worker, sanitation director, regional sanitary engineer and health educator will be provided. There will also be a new office for sanitation, new library and conference room, water-testing laboratory, equipment room and interviewing room . . . Bradenton became a seaport this year. A fruit company is operating a small fleet of boats between Mexico and Bradenton. The CHD will cooperate with the USPHS in this activity . . . Operating under a special local act the Manatee CHD was designated to administer a well drilling ordinance. The director of the CHD was approved chairman of the county board for this program . . . Manatee County has obtained approval and Federal assistance to dam the Manatee River. The project will create a reservoir from which a system of pipelines will supply water to the entire county. . . . The Manatee CHD and Manatee County Medical Society sponsored a community oral polio vaccination program the latter part of 1962 and early 1963. Type I vaccine was given to 47,395 persons; Type II to 42,965; and Type III to 29,130.

Monroe — Among important program developments in the county was a dental survey conducted by the CHD with assistance of the dental society. The first, third and fifth grades in all schools were examined. Fluoridation of the community water supply also began this year . . . As a result of long experience with the naval establishments in the county, the CHD took in stride the increased responsibilities created by military activities due to the Cuban situation . . . Much time was spent on the environmental health program especially relating to sewage disposal. It is felt that significant progress has been made in this program . . . The public health nurses have been taking the training courses for home nursing care which will prepare the staff for the development of a home nursing program . . . Land was donated at Marathon next to the hospital for construction of an auxiliary health center . . . Discussions were held with interested citizens in an attempt to develop a good mental health program in the community.

Nassau — Construction of a new auxiliary health clinic for Yulee was approved by the Board of County Commissioners. The new quarters will be housed in a community building which will cost \$22,000. The building will be conveniently located and adequate space will be provided for the CHD staff. Tentative plans are under consideration for similar quarters at Hilliard . . . The dental trailer of the SBH visited the county from May-December. Some 1194 children received dental care during this period . . . The CHD staff actively participated in securing, organizing

and giving oral polio vaccine in December. Seven clinics were established which gave the vaccine to some 12,822 people out of a population of 19,000. Follow-up clinics were held at the CHD. Local doctors, nurses, school people, civic clubs and others cooperated in the program to make it a success . . . Cooperating with civil defense, a medical self-help course was presented to the emergency sheriff's platoon in a "crash" program. Two eight-hour sessions were held. Because of widely differing backgrounds in education and experience of students it was felt that this course was not too successful . . . A "Gray Lady" (Red Cross) program was begun in a second school in the county. These workers man school health clinics. Two Future Nurses Clubs are active and enthusiastic . . . The sanitation staff participated in a statewide arbovirus survey program in cooperation with the SBH. A number of chicken flocks were tested in the area . . . The mobile chest X-ray unit of the SBH visited the county with foodhandlers and school personnel being X-rayed. Chest X rays were also taken of all Federal Aviation Authority personnel at the Air Traffic Tower in Hilliard.

Okaloosa — A Community Nursing Council was organized and chartered by law as a nonprofit organization providing nursing service. This is a cooperative program between the Council and the CHD which actually provides the community nursing service. Six public health nurses provide care for the sick in the home. Approved by the county medical society, this service is available on request of the attending physician. Although the program is new, those concerned are well pleased by the wholehearted reception of the program by patients, their families and attending physicians . . . During 1963, additional interest was developed regarding the elimination of pollution of the north Choctawatchee Bay. The County Commissioners have given their full support to a program for surveying, studying and locating all sources of human pollution of these waters. Cities on the north and west shores have recently installed additional community sewerage systems to serve the rapidly increasing population. The city officials have demonstrated their complete cooperation in working with the CHD staff so that the bay can be fully utilized for oystering, fishing, boating and swimming.

Palm Beach — Approval was received for a new Alcohol Clinic financed through the Florida Alcoholic Rehabilitation Program. Rather than establish this as a separate program, the clinic was incorporated into the recently organized Psychiatric Clinic which is an outpatient clinic serving adults . . . An addition to the Migrant Project was approved under the new Migrant Health Act. This addition provides for a staff of two sanitarians and a health educator who will carry out a program for improvement of the personal health and environmental sanitation of migrant workers. These additional services will be incorporated into the original project as part of an overall team effort to promote health services for agricultural migrants. Emphasis will be placed on health education techniques. Funds have also been secured to provide an improved mobile clinic. This will carry services to the farms and housing areas where migrants are located . . . Expansion of the rehabilitation program has continued under the direction of a physiatrist. A full-time physical therapist and occupational therapist are now employed. The program

provides direct services to patients in the county homes and private nursing homes as well as being an educational program for others working with disabled people . . . An accident prevention program was initiated in cooperation with the SBH which includes a survey of hazards in homes and other premises visited by nurses and sanitarians. Another aspect of the program pertains to analysis of factors contributing to death by drowning . . . The newborn immunization program was expanded with the addition of two new nurses to the staff . . . A survey was made to determine the effect of industrial wastes from the rapidly expanding sugar industry in the area of Lake Okeechobee. The survey report and conferences with representatives of the industry has resulted in the retaining of consulting engineers to study the problem in order to abate the pollution through appropriate treatment. One plant has already presented a plan for treatment of wastes which has been approved by the SBH . . . As a result of reorganization of the Division of Engineering and Sanitation, the scope of services has been expanded. A Specialized Service Section has been added which undertook a complete review and approval of all swimming pools in the county . . . Stream pollution surveys were conducted on the Loxahatchee River and Lake Worth. These surveys were designed to investigate the effectiveness of recent sewage treatment facilities in coastal municipalities . . . All of the labor camps which house migrant farm workers were surveyed and evaluated during the year. The 110 labor camps in the county are undergoing remodeling and rebuilding to meet code requirements.

Polk — A Public Health Nurse Coordinator Project was begun at the Polk County Hospital to provide continuity of services for patients by the hospital, CHD and Community Nursing Services of the county. During the first three months of operation, some 100 patients were referred for public health nursing care . . . A chronic disease multiphasic screening project was carried out in one community to determine the advisability of instituting such a program on a countywide basis . . . Child-spacing information is included in all MCH visits with materials supplied at cost when prescribed by clinic physicians. No serious administrative or medical problems have been encountered . . . Phenylketonuria (PKU) screening is done on all infants seen by the CHD using the ferrous sulphate method . . . A staff nurse qualified in physical rehabilitation taught three series of classes to local hospital personnel . . . A Community Nursing Council of one area sponsored and financed Pap smears for maternity patients in that area. This program is expected to be expanded to cover the entire county in January 1964 . . . Tuberculin skin testing on infants conducted in one area will be extended to other parts of the county in 1964 . . . Cooperated in a program to evaluate home situations before prematures and problem pediatric patients are released from the hospital . . . Community nursing services were extended to include the ninth of the 14 communities in the county . . . Began a program to inspect and license commercial child care centers under authority of a local act passed by the 1963 Legislature . . . Two new auxiliary health centers were completed and dedicated during the year — the Frostproof Center built at a cost of \$40,000 and the Auburndale Center which cost \$45,000.

Putnam — The community home nursing care program begun by the CHD about a year ago is progressing and is gaining community interest and support . . . Plans are being made to participate in the newborn immunization program . . . The tuberculin skin testing program in schools was discontinued because the results did not seem to warrant the amount of time spent on the program . . . Construction was begun on a new headquarters health center at Palatka. Cost of the building will be approximately \$163,000. It is centrally located on the courthouse grounds.

St. Johns — In October the CHD observed its third birthday as a full-time health department affiliated with the SBH. It is felt the CHD has made immeasurable gains in instituting effective public health programs. Despite personnel shortages, continued progress and improvements are evident. Branch clinics in the outlying areas have been expanded. Two civil defense hospitals have been placed in the county and the CHD is working closely with the local civil defense office. The school health program has grown materially with more immunizations and examinations of school children being done. The CHD has worked closely with city officials in promoting renovation of the sewerage system at St. Augustine. The CHD cooperated with the local medical society in setting up a mass oral polio vaccination program during the latter part of 1963. Despite staff vacancies, the environmental sanitation program has also continued to grow with emphasis being placed on inspection of eating establishments, water supply and sewage disposal.

Santa Rosa — Conducted a tuberculin skin testing program on some 6151 school children in order to compare the Heaf and Mantoux tests. Follow-up X rays were done on reactors . . . Members of the CHD staff participated in a morals education program for over 2000 high school students lecturing on sex education and preparation for marriage . . . Staff members taught medical self-help courses to 4-H Club members and conducted mother and baby care courses for expectant mothers . . . A local bill for compulsory inoculation of dogs, passed by the 1963 Legislature, was put into effect during the year. The CHD set up clinics at which two veterinarians inoculated 1470 dogs . . . A mobile chest X-ray program was completed in September. Out of 3710 people X-rayed, 7 active cases of tuberculosis, 5 lung tumors, 17 enlarged hearts and 30 cases of other pathology were discovered . . . The CHD provided physical examinations for all preschool children, bus drivers, driver education students, high school football and basketball teams and students in one high school. Physical defects found were referred for treatment . . . Began a study of 269 suspected "exceptional children" in the schools. An attempt will be made to relate physical disease to some of the intellectual, personality, social and other problems encountered . . . Continued to study the hookworm problem in the county which apparently has shown a significant decrease during the past three years . . . A brief educational program on the importance of smallpox vaccination resulted in almost a 100 per cent increase in smallpox vaccinations over the previous year.

Sarasota — Plans are being discussed with the Board of County Commissioners for the construction of a new health center in the southern part of the county . . . The Dental Preceptor Program begun in late 1962

developed during the year through the cooperation of the local dental association, School Board, Junior Woman's Club, and Bureau of Dental Health. One elementary school was selected for a five-year pilot study and an intensive educational program is being carried out . . . In cooperation with the local School Board, the medical self-help training course has been approved for all junior high schools in the county. Many students have already completed the course. The local Red Cross has also included this in their first aid course . . . As a result of the success of the Hospital-PH Nurse Coordinator in the Sarasota Hospital, one of the nurses in the Venice office is now serving on a limited basis in this capacity at the Venice Hospital. The Medical Assistance to the Aged program for visiting nurse service has been approved for the county and is in effect. In an effort to acquaint Visiting Nurse Association (VNA) Board members with the actual day-to-day work performed by the nursing staff, members of this board accompanied the public health nurses in the field for half a day. A manual was prepared for VNA Board members to keep them informed of program developments . . . The TOPS ("Take Pounds Off Sensibly") Club which has been meeting at the CHD for the past four years has grown and a night class has been started so that working people may attend. The CHD has encouraged this group and presented programs when requested to do so . . . Due to the interest and efforts of the public health nurses in the Venice office, an Association for the Mentally Retarded has been organized. A school for retarded children was opened in that area with local financing . . . The CHD cooperated with the Mental Health Association to develop two new services for psychiatric patients: Friendship House and Horizon Center. The mental health worker participated in planning, initiating and establishing Friendship House which provides social and occupational therapy to mentally ill and geriatric patients. This facility opened in October and has a club room, reading room and space for arts and crafts. The clinical social worker serves as Director of Friendship House with most of the work being done by members and volunteers. Horizon Center opened in December. The center provides living quarters for white female patients. The goal of the center is social and vocational rehabilitation. Each patient has her own physician with follow-up services provided by the visiting nurses and mental health worker . . . A survey of community facilities and resources has been made with plans for a Comprehensive Community Health Program. This program will include services to the chronically ill and aged with counseling, homemaker services and a program for training and supervising volunteer workers . . . A premedical student was employed during the summer to study the problem of salt water infiltration into the fresh water supply. Investigations were made to determine how to maintain water quality in existing and new wells. Chemical tests were run to see if proper casing of wells, cementing of annular space, would prevent a mixture of poor and high quality water. . . . The sanitation staff worked closely with the Department of Conservation in studying the "red tide" problem and its effect on shellfish.

Seminole — Conducted a dental screening and oral hygiene program in the elementary schools in the southern part of the county during the early part of the year . . . Began a countywide venereal disease con-

trol program in March with an intensive educational program directed at upper elementary and high school students in cooperation with the VD staff, SBH. A course in preventable diseases has been added to the school curriculum . . . Trained 41 "Gray Ladies" to work in school health clinics. . . . In cooperation with the local Lions Club special eye examinations were given to 100 needy children with glasses being provided for 77. The CHD director was appointed to the Board of Sheba, Inc. (Seminole Hospital Eye Bank Association) . . . Plans previously made resulted in the initiation of the community home nursing care program in the county in October. Response to this program has been good . . . Four midwife trainees received training through the CHD . . . The nursing staff presented programs on weight control to the eight Home Demonstration Clubs in the county . . . In cooperation with the District Heart Association, the CHD sponsored several programs on resuscitation using the manikin, "Resusci-Annie," and movies . . . Promoted the medical self-help program in the schools with the result that this program has been made a part of the school curriculum . . . Operating under a special local act concerning rabies control, the CHD has gained the support of the Jaycees, who have taken this program as a project . . . Child care center regulations were adopted in three cities in the county.

Volusia — Special emphasis was placed on the school health program during 1963. With the assistance of the sanitation consultant, SBH, an improved program of school sanitation was begun. All schools in the county will be visited regularly with defects found being reported to the school principals. Once each year, a review of all schools will be made and a report will be submitted to the Board of Public Instruction . . . A guide book was prepared to help school health coordinators plan and execute better school health programs. Every school in the county now has a school health coordinator with some large schools having two. They work with the public health nurses and teachers in conducting school health programs. There are 57 schools with some 30,000 children in the county. The school health guide is loose-leaf and constructed to permit continuous revisions as new material is added. The guide includes information on all health and sanitary regulations of the state as well as forms, schedules and other information important to the program . . . With the cooperation of the local medical society the following programs were carried out: a glaucoma screening program with about 3000 persons tested; organization of a Diabetes Society and diabetes screening program; physical examinations for all high school driver education students sponsored by the medical society; plans were made for participation in the newborn immunization follow-up program; a mass Sabin oral polio immunization program was begun in the county; and a health exhibit of venereal disease was shown at the Annual Home Show . . . The CHD conducted a program to standardize all X-ray units in the county. The pollution survey of rivers and lakes in the eastern part of the county is still underway and is furnishing guide material for the shellfish and industrial waste programs.

Walton — In addition to a general program, continued emphasis was placed on civil defense. A written civil defense plan was completed

by the staff as requested by the SBH. As part of this plan, 27 women were trained in the American Red Cross First Aid Instructor Course and have begun teaching first aid to various groups in the county.

ACCIDENT PREVENTION PROGRAM

GEORGE A. McCOY, M.D., M.P.H.
Director

The purpose of the Accident Prevention Program (APP) is to give guidance to the County Health Departments (CHD) in expanding their accident prevention activities in the fields of home, school and off-the-job safety. While it is still felt that traffic and industrial safety are the responsibility of other agencies, a greater interest in this area has been taken this past year. Efforts were made to encourage the use of seat belts by all CHD personnel, thus incorporating traffic safety into their daily activities. Personnel from the Automotive Crash Injury Research (ACIR) Program visited the APP on two occasions and as a result of these meetings, it was decided to institute the ACIR into Florida early in 1964. This will be in cooperation with the Florida Highway Patrol, The Florida Medical Association (FMA) and the Florida Hospital Association (FHA).

Early in the year the Florida Industrial Commission launched its second annual safety campaign at a conference in Orlando. The APP participated in regional safety conferences which were held throughout Florida. Through these conferences a great number of people were informed of the State Board of Health's (SBH) interest in accident prevention and the contribution which the various CHDs were able to make at a community level. Cooperation was thus established between two state agencies interested in a common purpose; namely, the decrease in number and severity of accidents.

Early in the year the Aetna Insurance Company cooperated with APP in conducting a series of safety conferences throughout the state. Safety control officers and interested health officers from the various CHDs attended these meetings. Not only was the investigation of accidents to employees discussed but greater participation in the APP by all CHD employees more fully explained. As a result of improved investigation of accidents to employees, it is felt that the purpose of this reporting procedure is more thoroughly understood.

In May, a seat belt campaign was conducted among employees of the SBH in Jacksonville. As a result, over 500 seat belts were installed in privately owned vehicles of the employees in the Jacksonville office. One of the belts purchased during this campaign saved the life of the previous director of the APP. Another employee was hospitalized as a result of an accident in which seat belts were not used. This campaign was later extended and made available to all SBH employees throughout the state. This did not result in a great cessation of traffic accidents to CHD employees, as two were seriously injured while riding in a state-owned

vehicle which was equipped with seat belts but which were not in use at the time of the accident.

About the middle of the year, hospitals of the FHA other than those in which the poison control centers are located, were visited in the interest of reporting accidental poisonings. In conjunction with this campaign to increase the reporting of accidental poisonings to the CHDs, 10 auxiliary poison control centers were established. This increased interest in poison prevention has resulted in 2990 reports having been received throughout the last six months of 1963, in comparison to 1995 during the first six months, during which time reports were received from some 20 participating hospitals. Follow-up visits by CHD nurses totalled 2082 for the last six months in comparison with 1735 for the first six months of the year — an increase of 20 per cent.

Of the 4985 reports analyzed, 3018 (60 per cent) occurred in children under five years of age and of these, 1322 were two years old. As in previous years, the substances most frequently ingested by this age group were aspirin, other internal medications, cleansing and polishing agents, insecticides and kerosene — in that order.

It is interesting to note that of the total poisonings now reported, 40 per cent are five years of age and over. This is an increase of two per cent over 1962. A total of 1358 suicide attempts were reported — August and October being the months in which suicide was attempted most frequently. This correlates with the total number of poisonings reported, as August and October led in total numbers reported.

The snake bite study begun the previous year was continued. A total of 250 bites were reported during 1963, and of these there were two fatalities as compared to 277 reported bites and three fatalities in 1962. As in the previous year, 60 per cent of the bites reported were those of venomous snakes. Cooperation with the Venomous Snake Bite Committee of the FMA was maintained so that the committee could continue its evaluation of the clinical management of the cases. Liaison was maintained with the University of Florida where work was begun on the domestic production of a modified coral snake antivenin.

At the September staff meeting of the Palm Beach CHD, the personnel decided on an accident prevention campaign for 1964, with special emphasis toward the prevention of accidental drownings. In this connection a hazard report has been developed which will be utilized by the CHD personnel in locating and eliminating various hazards noted during routine visits. This activity is to be coded as an accident prevention activity on the monthly activity report.

HEALTH MOBILIZATION PROGRAM

CLAUDIUS J. WALKER, B.S., M.S.P.H.
Director

The Medical Self-Help Program is continuing as a county health department (CHD) function but has been incorporated into the school

curriculum in 23 counties as well as the parochial schools in the Diocese of St. Augustine and that portion of the Diocese of Mobile-Birmingham which lies in Florida. Efforts to expand this program into other school systems, secular and parochial, is continuing. Television video tapes designed to orient teachers to the program have been prepared and were shown over the facilities on Channel 7 (ETV) Jacksonville. Personnel of the Duval County Board of Public Instruction and Duval CHD were used. Direction of the programs and use of the facilities were provided by television station WJXT-TV, Jacksonville. It is planned to use these tapes for the same purpose in other counties in the near future, if this program proves effective in the pilot county.

The State Board of Health (SBH) has accepted custodial responsibility for 16 of the Civil Defense Emergency Hospitals (CDEH) prepositioned in the state. Correction of outstanding deficiencies among the remaining 19 have proven unexpectedly difficult. Acceptance of further units has been postponed until the federal inspection teams have left the state late in January 1964. This is to prevent confusion due to the change of custodians. Supply additions designed to bring the CDEHs up to a 30-day operational capability are being shipped into the state as the units are accepted by the SBH. There will eventually be four supply additions for each CDEH. To date the state has received only Addition No. 1. By December 31, 1963, the SBH had accepted responsibility for \$472,000 worth of CDEH property. When the transfer of responsibility is complete, the SBH will be responsible for \$1,732,500 worth of property. In addition, 20 new 1962 model CDEHs have been allocated to Florida by the U.S. Public Health Service. If all of these are accepted, the SBH will become responsible for another \$990,000 in property, for a total of \$2,722,500.

A new position, that of CDEH Storage Coordinator, was created late in the year and a person was found to carry on these duties on a temporary basis. Application has been made to the Florida Merit System to formalize the position and make it permanent.

The CDEH Training Program, located at St. Petersburg, has continued to grow. During the year, the teaching program has been formalized and a permanent teaching staff assigned. These assignments are a part-time duty for all staff members. A second training center is in process of development at Mt. Sinai Hospital, Miami Beach.

Florida has received one of 20 prototype training units. These are experimental units and were allocated to selected states for experimental teaching programs in local areas.

Liaison between the SBH and the State Office of Civil Defense has been greatly improved — to the benefit of both agencies — during the year.

One of the program coordinators received training at the Civil Defense Staff College, Battle Creek, Michigan, in management and plans and operations during the year.

DIVISION OF NUTRITION

MARY BRICE DEAYER, M.S.
Director

This division is responsible for organizing, planning, developing and promoting a sound nutrition service as an effective part of the health program throughout the state. The primary purpose is to improve the nutritional status of the people of Florida including all ages and socio-economic levels. The importance of nutrition in conditions of physiologic stress such as growth, pregnancy and lactation has long been recognized. Knowledge that many types of disease such as those which are infectious, metabolic and degenerative are influenced by nutrition, increases every year. Recent investigations indicate a close relationship between nutrition and many forms of pathologic stress such as severe infections or trauma. Consequently, it becomes increasingly evident that nutrition must be a vital part of any good health program interested in prevention and control of disease.

A nutritionist was employed in August to begin work on the Rural Demonstration Project, a position which had been established the previous year but had not been filled prior to this time; and one county health department (CHD) employed a nutritionist for the first time as a member of the staff in the Division of Adult Health and Aging.

In each region counties may receive service on a regularly scheduled basis or upon request. In those counties where the nutrition consultant visits the county on a regular schedule, it is evident that there is far more continuity of service and effective nutrition programing than in those counties not visited regularly.

During the year a considerable amount of time was spent in the planning, preparation, preliminary field trials and evaluation of a system for recording statistical data on nutrition services performed which could be machine processed. Such a system has now been put into operation. This past year has seen a combined effort on the part of all the nutritionists, the Kellogg Project staff and the Data Processing staff in working through a variety of suggestions for data collection and reporting. The final product is a simple, short, easily kept instrument which should provide accurate data for program planning and evaluation on a county, regional and statewide basis. Since it is extremely difficult to evaluate a program which is largely educational in nature, it is felt that this is a real step forward in the evaluation process.

Although it was necessary to sacrifice the collection and compilation of complete statistical data for this year in order to try out and refine the instrument to be finally adopted for this purpose, sufficient data were available to indicate that the major concentration of service was in the following categories: maternal and child health, diabetes, institutional food service, normal diet and weight control.

The age groups for whom these services were primarily intended were: adults from 21-64, the older age group 65 and over, the school age child from 6-13 and the adolescent from 14-20.

The cultural groups to whom the greatest amount of service was rendered were: Anglo-Saxon most frequently; Negro next; and third, Latin.

Services were given most frequently through the CHD staff and in descending order of frequency through schools and institutions. A considerable amount of service was also given to patients themselves, individually and in groups.

By far the major portion of services was given indirectly. When given directly, it was primarily for therapeutic diet instruction on the order of a physician.

In providing *services to CHDs*, emphasis was placed on in-service education needed for ongoing health activities. Where possible, nutrition was considered in its relationship to an area of service such as its role in the home care program. Because of much recent investigation and published information on diet and heart a large number of requests were filled for in-service programs concerning this topic.

There has been much interest in information on diet with regard to the inborn errors of metabolism. Individual assistance was given to parents of children with phenylketonuria (PKU) as well as to professional personnel working with such patients.

On the Migrant Project in Palm Beach County, the nutritionist continued to provide consultation to the CHD staff and some direct clinic service to patients. The study on the growth patterns of migrant children continued and plans were made for this to be carried on after the nutritionist resigned from the project. The regional nutritionist is providing as much assistance as possible to the project until a replacement can be secured.

A special project was started in Gadsden County during the summer months to provide more detailed information on the dietary habits of the pregnant women attending the CHD clinics. When the data is complete, an educational program to meet the needs indicated will be planned and put into effect. The project was set up at the request of the county because of the many dietary problems encountered, the high number of midwife deliveries and the low economic status of many of the prenatal patients. Individual interviews at the clinic and several home visits to each patient were made by the home economics student working for the summer under the direction of the regional nutritionist. Special physical examinations with emphasis on nutritional status were done and laboratory tests made. Preliminary data indicate that approximately half of the prenatals interviewed were between the ages of 14 and 20, indicating the tremendous need for more information on the requirements of the pregnant teen-ager and the equally important need for teaching nutrition as early as possible. None of the diets so far analyzed meet National Research Council recommendations for all nutrients.

In the area of chronic diseases, much time has been spent on developing suitable materials for use in instructing diabetic patients who have difficulty interpreting the diet material ordinarily available. The

basic system of diet exchanges has been used in developing diet plans in color and picture form which are now being field tested in selected counties.

The employment of a nutritionist to set the Rural Demonstration Project in operation was accomplished in August. The purpose of the demonstration is to explore, study, plan, put into operation and evaluate the various possibilities of providing nutrition services to meet the needs of the population of a rural area. The pilot demonstration is being conducted in Highlands, Glades and Hendry CHDs. During the short time in which the project has been underway, the nutritionist has devoted her efforts to Highlands County.

In working with *other organizations and agencies*, joint efforts with agricultural extension, school food service and the schools proper continued in working to improve teen-age nutrition. Because of the interest in the new accreditation standards for schools, a considerable increase has been noted in requests for consultation on nutrition education at all grade levels. Assistance was given in providing nutrition instruction for the three regional school lunch workshops held by the State School Lunch Program in Madison, Sebring and Apalachicola. In addition, consultation was also given to several county school lunch workshops.

Cooperation with the Florida Heart Association and local heart groups resulted in diet classes for heart patients and their families being held in several counties.

Consultation to state and local welfare personnel has been given in regard to food budgeting, therapeutic diet cost, use of commodity foods and food service in child care facilities.

In providing *services to communities*, classes and talks have been given for community organizations and clubs as has been done in previous years.

Service to institutions has continued to grow. The dietary consultant to nursing homes made 43 visits to homes in 10 counties. There was more group education offered through classes and workshops for nursing home personnel responsible for food service. The modified diet section of the Food Service Manual for Nursing Homes was revised and is being tested now in one county before being made available generally. The entire manual is being revised.

The Annual Florida Nursing Home Short Course chose food service as its major topic, devoting two and one-half days to this subject. Many members of the nutrition staff participated in the planning and took part in the program where approximately 45 homes were represented.

In the *area of training*, field experience was provided for one graduate student from the University of Tennessee. Two students from the Florida State University (FSU) School of Home Economics were employed under the summer field training program. Plans have been developed in cooperation with FSU for an undergraduate practicum and intern program in public health nutrition but as yet there are no funds available for the proposed training program.

Consultation has been given and classes taught in schools of nursing, practical nursing programs and to undergraduates in food and nutrition courses.

One of the greatest needs confronted was the lack of qualified persons for nutrition positions. Efforts are in progress to revise salary ranges and job specifications. To further meet this need the proposed training program referred to earlier was developed and should be put into operation at the earliest possible date.

For the coming year it is anticipated that increasing efforts must be made to bring additional services to the so-called "high risk" prenatal patients; to work toward the establishment of good food habits prior to and through the teen-age years; and to increase diet counseling services for patients with diabetes, heart conditions and other diseases with diet complications especially in areas of the state where such services are completely unavailable locally. More nutrition services should also be made easily available to the migrant workers in all counties concerned.

DIVISION OF SANITATION

A. W. MORRISON, Jr., R.S.
Director

This division, in its fifth year of full scale operation, has experienced a significant increase in workload as Florida's population densities increase and industrial development continues to expand. The 1963 staff, consisting of the director, four sanitation consultants, two clerical personnel and the half-time services of a training consultant, once again placed major emphasis on providing effective consultation services and other supporting assistance for the county health departments (CHD). These services, coupled with responsibilities in recruitment of qualified sanitarians, providing basic and advanced level training for CHD sanitarians and administration of a variety of statewide environmental health programs, continue to focus toward the further development and improvement of comprehensive local environmental health programs in each of Florida's 67 counties.

CONSULTATION SERVICES

Staff members made a total of 367 field visits to the CHDs to provide assistance to county health officers (CHO) and sanitarians during the year. This average of five plus visits per county included a minimum of two visits to each of the counties. Local problems covered the entire spectrum of environmental health and considerable time was expended on shellfish and other environmental activities outside of division program responsibilities at the request of other bureaus and divisions. Non-environmental program areas were also involved upon occasion. In such cases, information was obtained and relayed to the counties or arrangements were made for the appropriate bureau or division to provide direct assistance.

Study and evaluation of the overall environmental health program in one county was completed and another continued during the year. Staff limitations, however, prevented extensive local program evaluation in additional counties which have requested such services. It is hoped that this important facet of division activity can be expanded in the coming year.

TRAINING

The sanitarian in-service training program included two basic 12-week general sanitation courses and three one-week topical courses. The 12-week course consisted of an eight-week period of classroom and laboratory instruction in Jacksonville and four weeks of internship in selected CHDs. Nineteen sanitarians: five from Dade, three from Alachua, three from Broward, two from Orange and one each from Escambia, Manatee, Palm Beach, Putnam, Seminole and Union successfully completed this course in 1963. The topical courses were presented as follows: food service sanitation, West Palm Beach, attended by 28 sanitarians from 16 counties; administration of local environmental health programs, Jacksonville, attended by 17 sanitarians from 15 counties; and local housing programs, St. Petersburg, attended by 26 sanitarians from 17 counties. A review of topical training activities for the past two years reveals that 200 sanitarians completed the short courses. Although several individuals attended more than one course, 59 counties (88 per cent) were represented at least once during this period. Responses to a training questionnaire distributed to each CHO and sanitarian during the year show a widespread demand for continuation of the topical short courses with requests indicating a need for training in some 15 additional subject areas. Future course topics will be selected with reference to degree of need as expressed by the CHDS.

Foodhandler training activities were conducted in eight counties: Alachua, Dade, Escambia, Hillsborough, Orange, Pinellas, Polk and Volusia with a combined total of 3381 persons completing courses last year. Dade and Escambia CHDs continue to operate their respective programs for all categories of food workers throughout the year. Staff consultants have assisted some of the other counties in development and presentation of managerial training courses.

PROGRAM ADMINISTRATION

The division is responsible in whole or part for administration of some 16 statewide environmental health program areas, five of which include legal requirement for SBH license or operating permit: trailer parks, food processing plants, camps, bottled water plants and rendering plants; and another which involves official recommendations to USPHS for required federal certification. Field activities associated with these programs are conducted by CHD sanitarians. Staff consultants provide technical assistance to the counties in all environmental health program areas.

Trailer Parks

The 2192 permitted trailer parks provided 93,311 trailer coach spaces at the close of 1963. These figures represent a net increase of 55 parks and 3429 spaces for the year. The number of trailer parks has increased by 504 (30 per cent) during the past five year period. Park quality characteristics are improving at a rapid rate as evidenced by an increasing ratio of independent to dependent spaces (1002 less dependent in 1963), realignment of existing parks to provide larger lot sizes and increasing numbers of spaces served by municipal type sewerage systems (4634 increase in 1963). The division's 390 permit transactions for the past year included: 112 new parks, 57 parks closed, 105 park expansions and 116 changes in ownership, park name or reduction in number of spaces. CHD sanitarians made 9760 visits to trailer parks to effect improvements and insure maintenance of satisfactory environmental conditions in 1963.

Food Processing Plants

The number and variety of food processing plants continue to grow at a rapid rate. Operating permits were issued to 633 plants in 37 counties during 1963. This represents an increase of 63 plants (11 per cent) over last year's total with an increase of 351 plants (124 per cent) since 1959. Technological development of new food preservation methods, food machinery and food packaging materials presents multiple problems in this field. Increased consumer demand for "ready to eat" food products promises to present additional problems of public health significance in the future. CHD sanitarians have increased activities in this important field, making 5181 visits to insure that food processing plants were operated under sanitary conditions in 1963.

Camps

Licenses were issued to 294 camps last year. This total consists of 250 migrant labor camps with space available for 36,382 occupants and 44 recreational camps providing facilities for 5377 persons. A comparison with last year's figures reveals a reduction of 10 in the number of migrant labor camps but an increase in facilities to provide for 1612 additional occupants. Recreational camps increased by four with facilities for an added 671 persons. Close surveillance over all camps was maintained during periods of occupancy to insure proper environmental conditions. CHD sanitarians made 5544 visits to the camps in 1963.

Bottled Water Plants

The number of bottled water plants was reduced by three during the year. Two separate cases of merger with an existing firm and a business failure accounted for this loss. Operating permits were issued to 26 plants in 17 counties and four out-of-state shippers in 1963. Routine checks of plant operations and sampling of bottled waters for laboratory examination were maintained throughout the year to insure high quality products for the consuming public. CHD sanitarians made 219 visits to the bottled water plants in 1963.

Rendering Plants

The number of rendering plants remained static with 14 operating permits being issued to plants in eight counties during 1963. Plans were reviewed for a new plant in Volusia County late in the year. Sanitarians continued to exercise careful control over rendering plant operations to insure that waste products were properly handled and that plant odors were maintained at satisfactory levels. Increasing significance is being attached to the role of final rendered products in the transmission of salmonella organisms. A high percentage of these products, commonly used as a component of animal feeds, has been found to be infected. Further study of this matter will be made in cooperation with the Division of Veterinary Public Health during the coming year.

Common Carrier Program

This division continued cooperative agreements with USPHS in connection with the Interstate Carrier Certification Program which includes water and food placed aboard common carriers and the handling and disposal of liquid and solid waste from such carriers. Complete evaluations of these facilities and operations are made at least twice annually by CHD sanitarians and reports are submitted to the division. These reports serve as a basis for the division's semi-annual recommendations to USPHS. The 108 facilities recommended for approved status in 1963 include: 27 airline catering and watering points, 10 airline servicing areas, seven railroad commissaries and catering points, 19 railroad watering points and 45 vessel watering points. Staff consultants and USPHS personnel provided assistance to the counties in this program.

Food Establishments

All counties continued major food hygiene activity directed toward the prevention of food-borne diseases with emphasis toward improvement in practices involving the handling, preparation and storage of potentially hazardous foods. The counties recorded a total of 29,105 food establishments of all types and CHD sanitarians made 164,659 visits to these establishments in 1963.

OTHER PROGRAMS

The CHDs conducted a number of additional environmental health activities involving: water supplies, liquid and solid waste disposal, school sanitation, housing, swimming pools, nuisance control, rabies control, hospitals and nursing homes, child care centers, recreational areas and other facilities. (For further details see Table 14, Major Activities of Local Health Units). Staff sanitarians provided assistance to CHO and sanitarians in all of these program areas throughout the year.

TABLE 13
PERMITTED ESTABLISHMENTS AND FACILITIES,
FLORIDA, 1963

County	Trailer Parks	Food Processing Plants	Camps	Bottled Water Plants	Rendering Plants
Alachua	39	28		1	
Baker	4	1			
Bay	53		1		
Bradford		2			
Brevard	89	27	9	1	1
Broward	123				
Calhoun	1	3			
Charlotte	20				
Citrus			6		1
Clay	14		43		
Collier	23		1		
Columbia	5	95	45	4	5
Dade	94	5			
DeSoto		1			
Dixie	5		1	1	
Duval	53	19			2
Escambia	83	30	2		
Flagler	4	1			
Franklin	4	1			1
Gadsden	7				
Gilchrist			6		
Glades	5				
Gulf	6				
Hamilton	3		2		
Hardee	3		6		
Hendry	6		2		
Hernando	2				
Highlands	8			1	2
Hillsborough	167	62	17		
Holmes			2	1	
Indian River	19	4	2		1
Jackson	6				
Jefferson	2				
Lafayette		2	5		
Lake	31	12	1	1	
Lee	72	9	2		
Leon	39	2			
Levy	7				
Liberty					
Madison	2		8	2	
Manatee	77	35	2		
Marion	32	2		1	
Martin	28	4			
Monroe	58				
Nassau	8	4			
Okaloosa	43				
Okeechobee	16	32	7	1	
Orange	117	2		1	
Osceola	15	23	65	3	
Palm Beach	108	6	10	1	
Pasco	53	72	7	2	
Pinellas	269	42	21		
Polk	101	1	2		
Putnam	17	4	2		
St. Johns	13	9	4	1	
St. Lucie	28				
Santa Rosa	19	51	2	2	
Sarasota	78	10			1
Seminole	4				
Sumter	8	1			
Suwannee	3	1			
Taylor	6				
Union		28	8	2	
Volusia	87	1			
Wakulla	1	2	2		
Walton	4				
Washington				4	
Out of State				30	14
TOTAL	2192	633	294	30	14

TABLE 14
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	A. COMMUNICABLE DISEASE CONTROL										
	Admissions to Service	Field and Office Visits	Treatment for Parasites	Immunizations Completed							
				Smallpox	Diphtheria	Whooping Cough	Tetanus	Poliomyelitis	Typhoid	Rabies—Humans	Rabies—Animals
	1	2-3	4	5	6	7	8	9	10	11	12
Total 1963.....	4917	10875	43449	102965	156804	84191	207504	304381	81992	80	57943
Alachua.....	36	92	1933	1600	2600	2129	4127	2263	764	0	0
Baker.....	4	5	355	321	374	181	724	1238	681	0	150
Bay.....	12	22	230	1881	1693	1614	4216	6440	7680	0	0
Bradford.....	10	11	132	304	537	327	624	1081	45	0	0
Brevard.....	172	391	475	1490	2747	1407	2824	3496	580	16	0
Broward.....	439	651	611	3653	6905	3488	8094	10845	240	0	0
Calhoun.....	3	7	151	447	579	363	947	954	581	0	0
Charlotte.....	211	1762	117	1680	2127	347	2156	3337	93	0	0
Citrus.....	34	34	46	251	970	293	1129	874	953	0	184
Clay.....	29	51	121	335	335	212	495	635	14	0	133
Collier.....	17	27	536	320	1255	585	1342	1105	340	0	0
Columbia.....	0	0	683	1579	5878	1785	6452	6671	5222	0	0
Dade.....	32	1122	298	18468	18950	12678	35097	31909	945	0	0
DeSoto.....	4	9	244	259	449	260	470	143	100	0	0
Dixie.....	6	15	73	117	291	206	368	410	336	0	0
Duval.....	32	80	58	1532	4148	2412	5562	9110	284	2	0
Escambia.....	11	20	2061	8491	11884	6273	15767	18166	7286	4	6310
Flagler.....	1	1	336	114	264	122	412	613	32	0	0
Franklin.....	374	434	201	85	285	282	460	413	189	0	0
Gadsden.....	6	6	6525	3502	4321	1169	6705	8195	6264	1	0
Gilchrist.....	39	39	1206	277	336	215	793	2407	749	1	0
Glades.....	20	32	56	157	437	88	451	455	133	0	74
Gulf.....	9	12	884	464	1186	1050	1751	1571	838	3	0
Hamilton.....	0	0	588	249	504	336	636	655	215	0	199
Hardee.....	3	4	193	250	662	312	792	721	423	0	0
Hendry.....	75	85	109	358	921	232	934	923	375	0	135
Hernando.....	0	0	247	234	357	114	515	637	9	0	0
Highlands.....	3	5	248	211	621	338	649	769	37	0	0
Hillsborough.....	1526	2399	1849	7851	13291	7784	13755	274	490	3	28160
Holmes.....	17	19	861	464	971	376	1138	1343	633	0	0
Indian River.....	1	2	215	241	653	342	891	1148	569	0	0
Jackson.....	32	33	850	1633	1722	874	3153	3329	2125	0	1
Jefferson.....	19	22	383	1212	836	574	1766	2303	978	0	396
Lafayette.....	0	0	79	38	89	79	135	188	41	0	0
Lake.....	25	54	132	253	717	359	746	814	6	0	0
Lee.....	3	6	453	1966	2501	712	3527	3074	2998	0	0
Leon.....	176	197	275	1327	1831	1238	2830	3732	1968	1	0
Levy.....	6	5	682	1196	1175	324	1260	7024	930	0	0
Liberty.....	18	25	448	232	329	171	837	973	384	0	0
Madison.....	23	29	505	903	1371	434	1942	2621	1792	0	198
Manatee.....	81	115	484	750	1007	493	1497	72625	110	1	2779
Marion.....	14	42	1246	3319	3914	1499	5484	7606	4913	0	0
Martin.....	1	1	480	504	1264	319	1256	604	833	0	0
Monroe.....	218	248	1	1426	1268	391	1539	1537	1632	0	0
Nassau.....	27	44	1038	1312	1276	671	1979	4627	3948	5	683
Okaloosa.....	60	67	228	1175	2811	2328	3687	4032	2662	0	0
Okeechobee.....	2	13	41	43	391	175	460	283	234	0	0
Orange.....	104	184	507	5087	7181	3908	6950	12900	5355	0	2979
Osceola.....	9	19	233	244	1001	620	1006	1766	612	0	0
Palm Beach.....	244	874	752	5702	9617	4537	10596	12860	1149	1	0
Pasco.....	14	35	1586	373	834	583	856	793	199	0	0
Pinellas.....	113	330	192	2399	4787	3816	6070	7257	416	0	56
Polk.....	257	498	983	4714	8488	4847	10222	13880	625	42	7238
Putnam.....	56	59	829	1973	1631	402	1937	867	24	0	0
St. Johns.....	17	61	236	1325	2532	414	2400	3011	2697	0	0
St. Lucie.....	0	0	136	151	638	332	867	462	42	0	0
Santa Rosa.....	3	5	348	1311	1471	1017	1707	1291	1348	0	0
Sarasota.....	67	106	214	402	928	557	969	484	31	0	8168
Seminole.....	118	317	5674	1202	1351	1124	1831	2811	1993	0	0
Sumter.....	22	32	722	1022	726	520	743	799	374	0	0
Suwannee.....	7	13	353	219	931	545	1766	2892	788	0	0
Taylor.....	0	0	349	630	1331	521	1833	2135	335	0	100
Union.....	1	1	112	142	248	163	348	504	168	0	0
Volusia.....	30	69	362	694	820	673	900	1643	279	0	0
Wakulla.....	2	4	153	59	281	242	809	724	688	0	0
Walton.....	7	15	349	507	1259	645	1313	1083	1038	0	0
Washington.....	15	15	387	325	1711	764	2007	2046	1117	0	0

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	B. VENEREAL DISEASE CONTROL					
	Admissions to Service	Diagnosed in Clinic	Patients Interviewed	Number of Contacts Named	Field Visits	Office Visits
	1	2	3	4	5	6
Total 1963.....	41979	13686	7587	14936	45306	85133
Alachua.....	234	87	65	176	375	395
Baker.....	7	7	5	3	6	23
Bay.....	185	91	50	67	204	213
Bradford.....	122	53	53	175	328	187
Brevard.....	103	22	75	123	433	271
Broward.....	1306	636	828	1414	4378	2728
Calhoun.....	13	12	9	6	7	27
Charlotte.....	8	0	5	0	3	11
Citrus.....	2	2	2	1	2	2
Clay.....	22	6	7	6	15	35
Collier.....	71	46	36	70	228	96
Columbia.....	377	181	181	217	312	301
Dade.....	11589	2566	1800	3315	12489	40898
DeSoto.....	4	0	4	2	13	8
Dixie.....	4	4	7	0	0	9
Duval.....	11815	1172	311	1587	5112	13970
Escambia.....	2969	2969	164	800	1915	3164
Flagler.....	12	11	8	2	9	37
Franklin.....	13	8	13	3	4	34
Gadsden.....	80	80	70	22	25	124
Gilchrist.....	5	5	3	3	0	10
Glades.....	2	2	7	12	10	1
Gulf.....	48	24	13	27	58	110
Hamilton.....	23	9	2	1	18	35
Hardee.....	4	0	2	8	2	3
Hendry.....	31	10	16	22	48	42
Hernando.....	10	10	2	12	14	18
Highlands.....	34	16	53	81	254	53
Hillsborough.....	4113	1536	868	1387	5891	9232
Holmes.....	8	2	6	5	0	14
Indian River.....	97	74	91	69	9	120
Jackson.....	42	42	40	14	1	42
Jefferson.....	67	42	27	11	5	169
Lafayette.....	6	1	1	0	9	8
Lake.....	6	3	0	0	5	10
Lee.....	116	89	116	110	389	144
Leon.....	1212	575	109	677	1507	1723
Levy.....	27	15	17	14	7	49
Liberty.....	2	1	2	0	8	7
Madison.....	14	6	10	18	24	28
Manatee.....	310	189	205	137	474	501
Marion.....	1061	355	263	613	838	1456
Martin.....	45	27	30	36	32	33
Monroe.....	91	67	68	69	173	176
Nassau.....	26	18	11	5	23	46
Okaloosa.....	166	134	128	96	13	197
Okeechobee.....	15	0	4	3	5	13
Orange.....	835	139	166	655	2111	1368
Osceola.....	31	31	29	87	30	136
Palm Beach.....	1285	916	460	1121	3954	2012
Pasco.....	24	19	21	24	17	39
Pinellas.....	1698	464	310	666	1294	1806
Polk.....	346	233	152	174	934	528
Putnam.....	70	52	55	26	25	118
St. Johns.....	244	82	82	89	5	550
St. Lucie.....	88	86	79	117	369	118
Santa Rosa.....	13	11	9	2	2	46
Sarasota.....	133	52	43	134	264	222
Seminole.....	303	145	146	172	392	449
Sumter.....	44	44	47	44	58	95
Suwannee.....	20	14	15	21	44	43
Taylor.....	24	12	14	9	16	32
Union.....	17	10	12	13	13	41
Volusia.....	216	133	132	138	101	628
Wakulla.....	38	9	8	5	1	79
Walton.....	18	16	8	14	1	20
Washington.....	15	13	11	5	1	20

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	C. TUBERCULOSIS CONTROL									
	Admissions to Service				Persons X-Rayed		Tuberculin Test	Field Visits	Office Visits	Cases Hospitalized
	Active Cases	Quiescent Cases	Inactive Cases	Contacts and Suspects	Miniature Films	14" x 17" Films				
	1	2	3	4	5	6	7	8	9	10
Total 1963	2542	722	6035	23180	434828	47172	77166	44918	56588	1838
Alachua	23	10	39	126	8933	451	352	734	216	20
Baker	8	2	4	19	0	75	37	51	43	7
Bay	25	4	53	120	0	329	171	115	189	24
Bradford	3	1	15	41	604	143	65	240	72	4
Brevard	40	5	138	1329	0	1906	4792	1156	1913	22
Broward	112	41	269	1146	53628	432	5037	4097	1452	238
Calhoun	0	4	16	10	1581	82	87	42	117	1
Charlotte	13	2	14	63	4073	1412	2111	212	1026	8
Citrus	3	2	6	19	670	35	13	51	45	2
Clay	11	5	25	49	866	84	48	109	89	1
Collier	9	4	36	160	6094	214	1481	297	219	11
Columbia	11	2	13	54	0	36	36	218	45	10
Dade	413	83	928	7356	43880	8166	2231	5149	18870	460
DeSoto	3	1	15	24	0	462	24	114	120	0
Dixie	7	2	1	1	0	29	11	28	55	2
Duval	111	71	681	442	5168	2812	360	1158	1966	21
Escambia	110	17	248	432	12476	1175	1191	3661	584	82
Flagler	1	0	9	28	347	88	466	62	361	1
Franklin	5	0	14	33	0	106	14	54	63	3
Gadsden	14	2	55	232	5677	85	217	453	340	13
Gilchrist	0	2	1	9	0	20	320	28	15	1
Glades	0	0	8	21	1069	33	10	34	33	0
Gulf	4	4	21	105	0	566	85	113	144	5
Hamilton	5	4	9	33	165	184	26	99	64	6
Hardee	3	12	4	47	664	684	3878	69	152	2
Hendry	12	5	15	108	3552	190	108	374	154	10
Hernando	1	1	6	6	1228	28	8	15	16	1
Highlands	8	0	45	61	12	75	119	185	142	5
Hillsborough	651	121	799	5223	69375	3312	4996	8951	7818	207
Holmes	15	1	14	102	0	95	316	83	268	2
Indian River	14	2	13	29	0	299	747	159	38	10
Jackson	43	13	29	206	0	359	557	222	463	19
Jefferson	0	0	14	5	666	880	497	26	18	0
Lafayette	2	0	1	2	0	0	0	13	0	2
Lake	25	11	132	250	13736	380	5224	809	192	24
Lee	52	12	50	31	12512	550	4759	150	381	26
Leon	34	13	89	340	14204	335	247	1367	788	24
Levy	5	4	19	91	1244	48	121	228	82	2
Liberty	3	1	8	8	386	14	24	32	40	1
Madison	1	1	16	114	2830	84	78	62	243	1
Manatee	19	12	135	187	7254	106	616	624	675	21
Marion	20	6	59	67	3376	537	1667	444	77	11
Martin	14	3	29	48	0	182	518	170	55	15
Monroe	8	3	32	68	0	379	1526	254	158	6
Nassau	2	6	22	35	537	103	90	141	79	2
Okaloosa	18	6	23	115	0	2365	544	480	155	12
Okeechobee	2	1	17	21	1364	33	28	16	73	1
Orange	67	21	215	317	23210	1112	5360	1094	2046	40
Osceola	8	9	47	39	967	84	56	85	228	3
Palm Beach	180	50	333	419	43190	1639	3049	2314	1497	160
Pasco	8	8	33	141	5229	138	78	326	256	7
Pinellas	89	26	329	678	30521	3221	1687	2043	4594	63
Polk	114	32	384	1395	24937	1703	10483	2984	4126	73
Putnam	10	7	18	69	0	942	1004	160	197	7
St. Johns	6	2	44	49	0	213	77	91	102	10
St. Lucie	17	12	61	47	0	153	30	222	246	16
Santa Rosa	15	0	23	69	0	483	5554	162	140	9
Sarasota	32	8	55	155	19290	534	496	494	553	27
Seminole	31	25	46	238	0	383	623	369	797	17
Sumter	6	0	23	116	2877	146	1095	175	488	3
Suwannee	13	3	23	46	675	73	79	122	114	7
Taylor	3	1	6	3	540	31	103	52	26	4
Union	0	0	5	8	626	27	1	17	88	0
Volusia	42	9	136	177	2416	6155	530	936	632	30
Wakulla	2	0	2	19	0	12	81	27	9	2
Walton	6	0	31	72	2229	98	833	45	159	3
Washington	10	5	32	107	0	57	94	51	232	11

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	D. MATERNITY SERVICE										E. CHILD HEALTH SERVICES			
	Patients Admitted to Maternity Medical Service	Visits by Ante-partum Cases to Medical Confer.	Patients Admitted to Maternity Nursing Service	Field Nursing Visits	Office Nursing Visits	Number of Midwife Meetings	Visits for Midwife Supervision	No. of Midwife Del. Supervised by Health Dept. Personnel	Ind. Enrolled in Classes for Expectant Parents	Admissions to Well Child Med. Service				
										Infants	Ages 1-4	Age 5 and Over		
	1-2	3	6	7	8	9	10	11	12	1a, 2a	1b, 2b	1c, 2c		
Total 1963	14619	45783	22644	53627	62168	195	996	15	364	15733	14225	6843		
Alachua	208	660	609	2142	2376	0	27	0	49	109	73	60		
Baker	12	15	86	111	41	0	8	0	0	0	3	1		
Bay	156	156	210	538	199	0	11	0	0	136	8	2		
Bradford	52	137	77	274	24	0	14	0	0	56	28	9		
Brevard	254	977	394	1665	1597	0	35	2	0	112	21	35		
Broward	313	425	474	1157	1007	22	19	1	0	541	9	19		
Calhoun	23	32	26	62	108	3	8	0	0	14	0	1		
Charlotte	0	0	1	5	0	0	0	0	0	15	10	19		
Citrus	2	3	5	3	3	0	0	0	0	0	0	0		
Clay	85	298	150	479	348	0	1	0	47	29	17	142		
Collier	160	401	193	184	821	0	10	0	0	71	13	21		
Columbia	52	49	178	382	392	12	64	0	0	15	23	12		
Dade	2698	8319	5469	16173	9011	11	28	0	0	5763	7572	1975		
DeSoto	0	0	0	0	0	0	0	0	0	0	0	0		
Dixie	11	15	43	77	75	0	12	2	0	2	1	1		
Duval	84	179	372	490	570	0	0	0	43	500	92	45		
Escambia	1042	2809	1088	2756	3379	1	17	2	0	678	150	6		
Flagler	83	309	63	148	333	4	0	0	0	61	8	12		
Franklin	10	24	24	29	56	0	1	0	0	2	3	2		
Gadsden	596	1304	907	905	1592	8	182	1	0	254	160	48		
Gilchrist	3	3	25	74	33	1	0	0	0	1	1	0		
Glades	29	105	42	61	121	0	0	0	0	5	1	0		
Gulf	19	35	31	52	63	0	7	0	0	18	11	2		
Hamilton	11	10	73	109	230	6	1	0	0	3	2	0		
Hardee	57	123	63	84	193	5	10	1	0	16	0	0		
Hendry	65	264	127	327	395	0	0	0	72	20	21	45		
Hernando	8	11	14	11	14	0	3	0	0	0	0	0		
Highlands	14	25	28	23	28	3	3	0	0	5	6	7		
Hillsborough	2038	7422	2575	4992	9118	0	2	0	0	2763	3320	2496		
Holmes	6	21	68	11	88	0	5	0	0	7	16	3		
Indian River	0	0	37	41	66	0	7	0	0	0	0	0		
Jackson	145	195	275	318	771	2	52	0	0	69	31	12		
Jefferson	41	88	84	164	126	0	3	0	0	58	22	0		
Lafayette	15	17	18	31	64	0	22	0	0	0	0	0		
Lake	98	181	166	190	270	0	26	0	0	29	2	0		
Lee	218	288	460	520	1181	16	2	0	0	100	1	0		
Leon	156	523	340	1447	714	19	15	0	0	92	176	63		
Levy	78	218	89	136	119	1	0	0	0	51	4	5		
Liberty	13	20	22	10	35	0	0	0	0	3	8	6		
Madison	63	182	118	257	247	4	11	0	0	10	1	34		
Manatee	186	758	225	745	1051	0	0	0	12	104	147	200		
Marion	0	0	106	335	4	1	35	0	0	0	0	0		
Martin	0	0	1	1	0	0	0	0	0	0	0	0		
Monroe	70	95	112	197	257	4	2	2	0	13	14	7		
Nassau	4	4	31	47	6	14	60	3	0	6	4	3		
Okaloosa	82	157	88	180	295	0	7	0	25	27	17	13		
Okeechobee	3	4	3	4	15	0	0	0	0	0	0	0		
Orange	879	3024	1075	1099	3045	6	3	0	0	376	162	164		
Osceola	127	380	96	150	469	9	0	0	0	84	37	2		
Palm Beach	817	2537	1248	4515	2944	1	0	0	0	1277	248	265		
Pasco	24	61	88	160	227	0	17	0	0	14	6	1		
Pinellas	941	4921	993	2166	5839	1	0	0	0	900	1249	376		
Polk	1265	4004	1667	4105	7289	10	17	0	3	717	48	151		
Putnam	264	820	267	290	676	9	3	0	0	122	20	28		
St. Johns	39	46	104	209	129	0	10	1	0	10	6	1		
St. Lucie	173	581	219	181	805	0	4	0	0	13	0	0		
Santa Rosa	1	1	5	9	3	0	0	0	32	2	12	53		
Sarasota	182	784	214	730	882	0	0	0	79	0	0	1		
Seminole	161	413	280	445	585	10	121	0	0	56	22	84		
Sumter	47	61	113	174	198	2	47	0	0	10	1	0		
Suwannee	45	86	52	82	211	0	1	0	0	18	3	23		
Taylor	53	79	51	78	151	0	4	0	0	6	0	5		
Union	47	135	81	66	138	0	0	0	0	67	17	39		
Volusia	234	872	352	1047	882	2	34	0	0	267	378	321		
Wakulla	27	67	40	51	10	2	12	0	0	24	7	0		
Walton	9	9	20	37	48	3	8	0	0	4	2	15		
Washington	21	41	89	86	201	0	5	0	0	8	11	3		

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	E. CHILD HEALTH SERVICES (Continued)											
	Visits Medical Conferences			Admissions to Nursing Service			Field Nursing Visits			Office Nursing Visits		
	Infants	Ages 1-4	Ages 5-over	Infants	Ages 1-4	Ages 5-over	Infants	Ages 1-4	Ages 5-over	Infants	Ages 1-4	Ages 5-over
	3a	3b	3c	5a	5b	5c	6a	6b	6c	7a	7b	7c
Total 1963.....	30244	21659	10009	29847	34155	84248	63269	70870	74240	39624	31604	138316
Alachua.....	145	93	72	640	559	1813	2175	1530	2046	418	324	1115
Baker.....	0	3	1	105	213	183	168	380	419	5	5	17
Bay.....	514	19	5	202	208	366	693	571	708	562	69	612
Bradford.....	74	42	10	164	374	299	509	1205	680	13	13	223
Brevard.....	184	33	38	435	648	1074	1552	3443	3747	286	336	742
Broward.....	705	60	488	1087	494	1054	2213	1263	2391	1060	50	165
Calhoun.....	15	0	1	18	11	75	43	16	98	27	15	88
Charlotte.....	15	11	19	148	182	1846	50	130	1027	336	378	3686
Citrus.....	0	0	0	6	16	63	7	21	108	0	1	1
Clay.....	35	21	152	170	242	713	532	531	638	52	65	788
Collier.....	78	14	21	105	32	184	95	64	368	136	28	74
Columbia.....	15	23	12	167	218	156	213	228	151	103	114	106
Dade.....	12139	11653	3075	6920	9312	17373	18429	27917	12245	9698	8133	52361
DeSoto.....	0	0	0	1	0	35	1	0	41	0	0	14
Dixie.....	2	1	1	47	46	62	75	78	89	47	14	18
Duval.....	1124	205	59	964	283	721	996	310	568	2211	441	462
Escambia.....	1945	352	41	1286	481	1334	2852	1395	1556	2013	408	3504
Flagler.....	99	24	15	85	117	253	131	144	145	121	128	272
Franklin.....	3	4	2	41	106	72	64	145	82	13	38	29
Gadsden.....	396	307	80	980	1834	1132	1271	2566	765	613	453	781
Gilchrist.....	1	1	0	33	66	270	71	130	238	21	96	365
Glades.....	5	1	0	36	52	48	34	49	89	30	42	27
Gulf.....	26	12	2	49	76	65	106	161	138	44	28	45
Hamilton.....	4	3	1	81	105	52	272	410	232	59	82	165
Hardee.....	16	0	0	48	15	65	89	24	72	18	6	26
Hendry.....	33	30	56	101	102	169	267	187	410	93	164	283
Hernando.....	0	0	0	12	27	13	44	43	6	13	2	2
Highlands.....	18	19	56	20	26	79	56	32	192	1	4	168
Hillsborough.....	4318	4803	3110	4627	6734	9835	4249	4173	8508	7829	9363	10445
Holmes.....	8	17	3	7	24	134	1	14	42	9	25	270
Indian River.....	0	0	0	59	22	605	224	45	142	34	5	623
Jackson.....	88	50	15	248	221	235	322	342	274	186	79	231
Jefferson.....	66	26	0	239	483	212	404	620	192	276	479	235
Lafayette.....	0	0	1	83	92	71	192	235	180	70	149	96
Lake.....	29	2	0	226	325	454	257	387	137	199	334	78
Lee.....	102	1	0	371	367	219	465	427	246	196	73	78
Leon.....	101	186	75	400	1470	1947	1809	5476	3648	252	1127	1726
Levy.....	7	4	6	75	91	99	137	119	107	45	16	27
Liberty.....	10	8	7	28	122	24	21	93	23	16	42	42
Madison.....	10	1	36	124	104	639	306	141	274	29	13	559
Manatee.....	141	209	290	396	887	2390	586	390	1110	609	1735	2951
Marion.....	0	0	0	157	117	1556	619	436	1161	23	18	1386
Martin.....	0	0	0	20	43	111	19	42	144	10	17	18
Monroe.....	14	16	10	164	337	796	213	516	430	185	311	938
Nassau.....	6	4	6	30	78	560	43	152	471	14	43	900
Okaloosa.....	25	15	13	103	107	519	183	221	775	53	86	320
Okeechobee.....	0	0	0	3	86	2	6	60	2	1	74	74
Orange.....	666	250	236	1374	987	1781	1434	1312	2079	1549	613	869
Osceola.....	163	100	2	105	76	88	89	66	81	195	141	248
Palm Beach.....	2385	413	401	1982	567	4322	7213	2497	6918	2388	539	7325
Pasco.....	17	10	1	114	273	192	200	705	416	105	158	132
Pinellas.....	2164	1666	453	1272	1983	11601	3618	4348	7795	2589	2726	23568
Polk.....	857	67	165	1777	1025	5879	4140	1945	3726	2621	661	6130
Putnam.....	122	20	28	185	80	122	281	173	79	142	41	125
St. Johns.....	10	7	2	90	35	90	288	55	181	27	14	34
St. Lucie.....	14	0	11	144	211	28	243	535	125	15	1	15
Santa Rosa.....	2	12	55	15	34	4387	39	104	655	17	31	5794
Sarasota.....	0	0	1	173	104	568	521	286	1227	2	1	197
Seminole.....	73	25	97	280	106	901	437	233	755	221	83	1341
Sumter.....	12	1	0	107	64	83	128	92	99	88	45	101
Suwannee.....	18	9	31	103	212	255	262	406	403	113	105	105
Taylor.....	6	0	5	55	33	90	108	73	165	31	13	77
Union.....	123	67	124	105	77	95	101	220	226	126	74	136
Volusia.....	493	710	599	581	744	2891	993	976	1593	833	1057	3376
Wakulla.....	29	11	1	27	24	264	40	28	26	8	5	246
Walton.....	4	2	15	13	19	924	20	22	152	12	14	1143
Washington.....	9	11	3	84	125	14	77	112	9	69	79	12

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	F. SCHOOL HEALTH												
	Pupils Examined by Physician						Screening by Other Health Dept. Personnel						
	Parent Present			Parent Not Present			Visual			Audiometer			
	Number Examined 1a	Referred for Further Diagnosis & Treatment 1b	Completed Referrals 1c	Number Examined 2a	Referred for Further Diagnosis & Treatment 2b	Completed Referrals 2c	Number Examined 3a	Referred for Further Diagnosis & Treatment 3b	Completed Referrals 3c	Number Examined 4a	Referred for Further Diagnosis & Treatment 4b	Completed Referrals 4c	Nurse-Teacher Conferences 7
Total 1963	35120	5144	3868	53764	4155	776	398056	33685	12841	169598	5599	2513	107863
Alachua	567	215	49	883	30	33	3695	473	111	1717	124	12	2233
Baker	84	12	0	63	23	0	0	0	0	5	0	0	98
Bay	37	1	0	375	31	8	1705	454	273	386	39	3	1578
Bradford	274	5	0	91	8	0	169	8	10	0	0	0	64
Brevard	29	8	2	24	10	3	0	0	0	0	0	0	1001
Broward	480	67	4	706	272	1	13502	2505	819	3	2	4	5728
Calhoun	11	2	0	1	1	1	1655	87	28	175	2	1	372
Charlotte	60	14	0	467	87	3	1559	167	31	1199	49	26	694
Citrus	40	1	0	580	9	2	157	20	3	0	0	0	340
Clay	142	32	7	120	18	3	4708	142	49	0	18	0	588
Collier	111	42	6	177	45	2	1503	217	64	1215	62	18	936
Columbia	0	0	0	72	10	7	21	7	4	3	1	1	16
Dade	3551	0	0	24506	0	0	68554	6379	1931	41953	1008	689	27050
DeSoto	89	26	9	194	54	0	658	95	15	824	75	2	333
Dixie	106	25	0	53	5	0	167	0	0	0	0	0	79
Duval	330	103	55	0	0	0	5040	1302	334	271	39	2	1180
Escambia	11	4	0	75	10	5	16331	1591	667	3956	98	49	3649
Flagler	60	1	0	124	1	0	819	172	7	61	32	1	51
Franklin	118	8	5	44	3	2	73	20	5	42	8	3	55
Gadsden	289	5	1	1883	158	9	2379	155	49	1796	44	13	1842
Gilchrist	12	1	0	80	12	3	575	86	4	10	2	0	237
Glades	138	1	0	216	66	16	24	33	20	0	0	0	192
Gulf	148	19	10	107	6	4	2038	257	112	43	0	0	264
Hamilton	21	4	0	171	7	6	183	43	3	225	0	0	234
Hardee	42	4	4	1178	96	23	169	35	14	137	5	3	408
Hendry	62	3	3	611	6	9	924	132	49	705	56	9	528
Hernando	168	5	0	1027	11	2	157	37	17	0	0	0	6
Highlands	189	120	7	1136	531	8	462	84	1	1	1	1	245
Hillsborough	4021	2888	2748	6288	1219	426	75239	4990	2784	37850	1595	692	11484
Holmes	263	49	0	333	27	1	543	82	6	2	2	0	109
Indian River	1	0	0	0	0	0	2606	170	40	326	35	10	265
Jackson	193	3	0	139	0	0	862	156	9	283	30	1	546
Jefferson	339	39	3	148	9	1	1177	122	40	96	15	0	69
Lafayette	2	2	0	52	0	0	2	1	0	0	0	0	4
Lake	839	4	2	73	12	0	4633	649	300	536	48	17	695
Lee	0	0	0	18	0	0	833	189	47	2	2	2	563
Leon	570	3	3	24	0	0	7830	512	456	6904	196	112	1528
Levy	46	6	0	885	33	0	1695	112	12	1288	26	0	58
Liberty	42	2	0	173	0	0	157	3	0	246	0	0	82
Madison	30	0	0	49	0	0	262	63	8	21	4	0	116
Manatee	228	0	0	31	0	0	1953	306	71	457	55	0	1092
Marion	76	0	0	1248	19	10	2925	412	62	159	12	0	1419
Martin	105	4	0	66	15	1	1896	240	58	75	5	3	161
Monroe	122	4	1	344	23	0	5926	238	87	4621	74	12	656
Nassau	101	3	0	64	6	0	316	28	22	146	39	13	559
Okaloosa	412	18	0	24	1	0	2397	103	4	150	4	0	369
Okeechobee	35	5	0	3	2	0	417	8	4	476	5	0	114
Orange	25	0	1	29	2	0	17776	1472	1125	3109	191	173	4221
Osceola	131	5	0	12	4	0	110	46	10	49	31	3	306
Palm Beach	135	2	0	2615	581	31	30356	2825	817	10698	345	113	7285
Pasco	49	20	15	8	2	0	0	0	0	0	0	0	22
Pinellas	16965	1155	895	1169	187	116	57597	2781	1085	24091	667	310	13301
Polk	687	78	16	213	14	11	21313	1293	640	1494	73	18	7712
Putnam	93	2	0	322	9	10	1003	105	23	0	0	0	296
St. Johns	38	30	2	1601	61	2	594	87	25	0	0	0	204
St. Lucie	0	0	0	0	0	0	2813	492	0	0	0	0	2
Santa Rosa	444	0	0	761	76	2	807	85	10	6	1	0	349
Sarasota	10	0	0	73	0	0	9114	161	148	6906	62	11	1568
Seminole	405	53	7	175	27	6	1916	135	66	2727	68	19	1341
Sumter	32	1	0	771	143	0	1490	116	19	333	62	10	372
Suwannee	64	15	0	255	86	1	1083	121	26	814	5	0	162
Taylor	1	0	0	0	0	0	1	0	0	1	0	0	264
Union	51	2	1	99	5	2	93	7	5	0	0	0	33
Volusia	859	11	3	311	5	1	886	17	10	911	2	1	102
Wakulla	103	3	3	389	27	0	1399	363	29	155	6	148	107
Walton	300	16	6	8	0	0	234	0	0	0	0	0	50
Washington	124	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	G. DENTAL HEALTH (Dentist Only)												
	Dental Inspections				Number Requiring Treatment				Number Completing Treatments	Number Admitted to Clinic for Treatment	Total Fillings	Total Extractions	Total Applications of Fluoride
	Ages 1-4	Ages 5-17	Maternity Patients	Other Adults	Ages 1-4	Ages 5-17	Maternity Patients	Other Adults					
									1a	1b	1c	1d	2a	2b	2c	2d	3	4	5	6	7
Total 1963.....	142	57981	204	134	119	39945	283	152	10677	26979	87805	24765	839
Alachua.....	0	5025	0	0	0	2253	0	0	240	1329	5108	463	217
Baker.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Bay.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Bradford.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Brevard.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Broward.....	0	10	0	0	0	10	0	0	129	397	2970	453	33
Calhoun.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Charlotte.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Citrus.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Collier.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Columbia.....	0	0	0	0	0	0	0	0	1299	4251	34052	6941	4
Dade.....	0	0	0	0	0	0	0	0	3	0	0	0	0
DeSoto.....	0	97	0	0	0	49	0	0	0	0	0	0	0
Dixie.....	0	0	0	0	0	0	0	0	399	1573	4057	932	21
Duval.....	0	853	0	0	0	1005	0	0	163	369	947	621	47
Escambia.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Flagler.....	0	737	0	0	0	602	0	0	0	0	0	0	0
Franklin.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gadsden.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gilchrist.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Glades.....	1	362	0	0	0	253	0	0	10	190	223	171	4
Gulf.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardee.....	0	1	0	0	0	1	0	0	1	0	0	0	0
Hendry.....	0	129	0	0	0	107	0	0	0	129	73	63	0
Hernando.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Highlands.....	0	639	0	0	0	944	0	0	57	550	796	556	51
Hillsborough.....	0	14436	0	0	0	10218	0	0	3042	2390	3476	2759	11
Holmes.....	6	230	0	0	0	175	0	0	0	0	0	0	0
Indian River.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Jefferson.....	0	127	0	0	0	72	0	0	72	51	47	21	0
Lafayette.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake.....	20	326	7	0	19	324	7	0	216	1356	3151	475	4
Lee.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Leon.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Levy.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Liberty.....	0	562	1	0	0	520	1	0	0	556	118	119	1
Madison.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Manatee.....	22	1626	12	10	10	878	12	10	224	359	774	294	0
Marion.....	0	0	0	0	0	0	0	0	157	2069	3881	1318	1
Martin.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Monroe.....	9	125	6	21	5	97	3	12	109	162	852	418	0
Nassau.....	2	2314	0	0	0	1194	0	0	861	1227	5240	951	26
Okaloosa.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Okeechobee.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Orange.....	0	13723	0	0	0	7489	0	0	186	1984	3345	1663	0
Osceola.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Palm Beach.....	28	1996	106	66	44	3763	200	130	1462	3911	7516	2267	93
Pasco.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinellas.....	0	832	0	0	0	419	0	0	733	1316	3290	559	0
Polk.....	7	5623	0	0	0	5163	0	0	230	575	3017	999	9
Putnam.....	0	1703	0	37	0	1301	0	0	23	230	301	151	9
St. Johns.....	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Lucie.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Rosa.....	0	2038	0	0	0	508	0	0	90	563	1500	834	3
Sarasota.....	8	3105	71	0	7	1476	59	0	272	348	645	244	0
Seminole.....	36	474	1	0	31	262	1	0	116	188	57	277	2
Sumter.....	0	186	0	0	0	160	0	0	0	0	0	0	0
Suwannee.....	0	0	0	0	0	0	0	0	67	201	536	133	0
Taylor.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Union.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Volusia.....	3	702	0	0	3	702	0	0	516	705	1333	1083	303
Wakulla.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Walton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	H. CHRONIC DISEASES											
	Cancer Service				Diabetes Service					Heart Disease Control		
	Admission to Service	Field Visits	Office Visits	Cervical Cytology Examination	Admission to Service	Field Visits	Office Visits	Relatives Tested	Non-Relatives or Others Tested	Admissions to Cardio-Vascular Disease	Field Visits	Office Visits
	1	2	3	4	5	6	7	8	9	10	11	12
Total 1963.....	5496	16714	15546	10740	3529	15331	15098	505	3459	5665	31591	10572
Alachua.....	158	507	151	201	53	506	322	0	0	149	1124	219
Baker.....	9	31	1	0	11	15	10	4	1	30	16	121
Bay.....	29	84	2	0	13	84	2	0	0	42	172	4
Bradford.....	61	195	29	0	11	98	0	0	0	65	691	127
Brevard.....	86	331	230	69	54	217	179	1	1	185	799	271
Broward.....	96	164	154	139	40	121	13	1	0	55	132	15
Calhoun.....	28	52	24	0	6	7	54	0	0	10	60	12
Charlotte.....	25	129	23	0	31	167	321	0	0	43	522	24
Citrus.....	4	10	0	0	21	30	38	0	0	31	3	131
Clay.....	39	85	14	0	23	93	4	0	0	75	712	43
Collier.....	91	664	203	154	15	347	31	0	0	42	155	169
Columbia.....	27	35	25	0	15	25	14	0	0	13	26	3
Dade.....	146	1614	16	5279	46	344	21	0	0	208	1860	6
DeSoto.....	30	155	39	3	19	1	177	0	0	0	0	0
Dixie.....	6	7	7	0	6	17	53	1	0	48	41	172
Duval.....	70	78	71	2094	18	30	30	1	0	56	108	35
Escambia.....	516	1735	1193	135	310	1595	1273	80	1	443	2195	881
Flagler.....	5	10	5	0	11	43	38	0	3	52	371	115
Franklin.....	22	78	46	0	30	25	87	3	11	27	17	71
Gadsden.....	72	358	30	0	54	61	135	2	0	235	873	932
Gilchrist.....	9	30	6	0	9	21	26	0	0	97	119	516
Glades.....	5	9	5	0	18	23	80	1	0	22	47	5
Gulf.....	30	121	71	0	24	38	104	3	1	54	16	311
Hamilton.....	9	120	30	0	24	65	130	0	0	51	269	162
Hardee.....	27	29	26	0	19	10	70	0	0	14	38	5
Hendry.....	19	41	14	0	29	169	211	89	18	59	169	166
Hernando.....	4	5	2	0	0	0	0	0	0	3	1	2
Highlands.....	31	87	9	0	32	49	161	57	0	17	28	3
Hillsborough.....	878	851	3973	0	822	1959	4960	26	136	622	2894	221
Holmes.....	27	27	34	1	73	21	492	18	28	27	39	153
Indian River.....	30	121	35	0	33	170	51	0	0	18	142	28
Jackson.....	47	157	24	0	41	40	316	0	0	78	104	228
Jefferson.....	11	41	1	541	40	60	147	0	0	43	143	37
Lafayette.....	1	1	1	0	6	14	66	0	0	0	0	0
Lake.....	60	83	42	0	38	89	23	0	0	46	73	34
Lee.....	21	19	4	0	9	12	10	1	0	11	10	39
Leon.....	140	119	237	370	50	407	291	4	3	109	870	48
Levy.....	16	72	4	67	38	38	76	11	1	81	61	200
Liberty.....	15	17	53	0	12	3	41	1	0	163	478	760
Madison.....	30	31	35	0	14	4	170	5	0	20	24	32
Manatee.....	44	283	11	94	159	454	378	13	15	107	672	188
Marion.....	16	83	6	0	27	256	26	0	0	47	541	14
Martin.....	16	23	6	0	12	20	21	0	0	7	6	6
Monroe.....	68	202	94	0	42	124	82	2	2947	56	135	61
Nassau.....	27	56	6	0	16	37	9	2	0	36	56	19
Okaloosa.....	41	260	16	0	40	155	48	4	0	78	512	108
Okeechobee.....	7	21	4	0	4	8	37	0	0	5	5	27
Orange.....	184	28	2566	939	48	59	213	1	179	85	182	78
Osceola.....	21	23	35	34	16	21	85	0	0	19	43	122
Palm Beach.....	366	2102	960	286	128	1492	277	0	0	420	4438	639
Pasco.....	50	97	140	0	76	172	226	49	97	37	50	35
Pinellas.....	611	1727	2437	282	117	225	844	2	1	549	3930	1410
Polk.....	753	323	2029	30	246	788	703	73	4	237	609	329
Putnam.....	14	134	15	0	21	24	41	1	0	26	74	95
St. Johns.....	15	35	7	0	57	120	119	22	1	22	28	5
St. Lucie.....	20	123	30	0	2	9	8	0	0	42	683	32
Santa Rosa.....	51	114	33	0	56	73	200	0	0	112	186	505
Sarasota.....	56	582	0	1	28	209	4	0	0	67	921	2
Seminole.....	10	9	7	0	20	14	129	8	6	51	57	92
Sumter.....	29	41	34	20	22	8	77	9	0	20	12	26
Suwannee.....	38	168	40	1	41	131	78	2	0	31	131	44
Taylor.....	34	136	62	0	28	41	125	0	0	29	148	71
Union.....	3	4	7	0	15	2	77	0	3	18	9	55
Volusia.....	74	1705	78	0	104	3795	490	0	0	166	2661	154
Wakulla.....	18	55	2	0	8	28	24	0	0	14	27	23
Walton.....	24	35	23	0	31	43	305	7	2	36	64	124
Washington.....	26	37	27	0	42	5	240	6	0	4	9	9

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	H. CHRONIC DISEASES (Continued)			J. MENTAL HEALTH							
	Other Chronic Diseases			Admissions to Service			Field Visits		Office Visits		Mental Health Conferences
	Admission to Service	Field Visits	Office Visits	Children	State Hospital Patients	Other Adults	With Patients	About Patients	With Patients	About Patients	
13	14	15	1	2	3	4	5	6	7	8	
Total 1963.....	9709	51225	11355	6380	5856	4722	18649	24260	32285	31347	12466
Alachua.....	208	1344	183	388	204	211	1987	3805	1551	1368	756
Baker.....	1	0	1	1	1	1	14	6	7	12	0
Bay.....	238	778	140	0	139	4	373	71	37	110	3
Bradford.....	134	807	244	0	24	0	109	42	17	4	0
Brevard.....	335	1478	557	65	80	71	503	860	101	601	270
Broward.....	321	794	47	246	33	336	487	162	3589	1071	1470
Calhoun.....	49	136	62	14	29	3	49	121	12	59	161
Charlotte.....	58	610	102	73	1	7	104	129	25	108	68
Citrus.....	11	1	81	29	26	8	35	159	50	129	146
Clay.....	195	970	194	56	20	52	316	217	101	161	55
Collier.....	126	751	101	244	21	111	271	609	817	819	551
Columbia.....	114	375	66	0	35	0	58	39	15	5	0
Dade.....	122	821	6	1516	506	350	2030	2518	6186	6397	1158
DeSoto.....	29	83	27	43	1	5	2	15	73	69	32
Dixie.....	79	232	342	9	1	6	36	42	7	8	23
Duval.....	59	80	23	22	248	72	478	562	64	181	0
Escambia.....	420	4324	55	14	226	119	860	939	37	13	8
Flagler.....	36	260	22	20	5	5	32	41	34	44	519
Franklin.....	42	15	69	7	13	1	28	34	42	9	0
Gadsden.....	208	963	518	29	78	17	174	206	157	180	8
Gilchrist.....	81	249	331	0	4	4	6	4	1	1	0
Glades.....	20	37	6	19	0	0	5	18	14	20	3
Gulf.....	29	115	74	12	14	3	18	52	56	60	2
Hamilton.....	124	167	332	1	14	1	59	25	28	9	0
Hardee.....	23	31	13	111	6	7	62	19	44	81	36
Hendry.....	69	270	224	41	10	7	49	76	41	53	17
Hernando.....	13	16	0	20	23	10	32	132	2	27	121
Highlands.....	57	271	3	23	15	72	117	211	33	90	38
Hillsborough.....	1064	4515	481	858	444	320	1808	1169	2207	2768	570
Holmes.....	63	37	126	21	16	10	18	20	51	41	18
Indian River.....	93	384	54	5	24	11	125	83	25	31	0
Jackson.....	57	103	232	54	38	38	192	412	126	148	370
Jefferson.....	20	59	5	25	41	4	77	255	34	19	387
Lafayette.....	8	44	1	2	1	4	6	1	1	4	0
Lake.....	114	160	81	17	39	7	50	36	46	83	0
Lee.....	112	119	314	51	92	49	114	193	132	496	126
Leon.....	107	1204	42	245	171	416	536	380	2493	975	175
Levy.....	107	265	96	18	33	17	69	123	33	75	73
Liberty.....	262	336	532	1	4	0	1	0	25	13	0
Madison.....	34	69	42	0	17	3	74	37	64	39	0
Manatee.....	103	669	422	32	119	114	249	593	164	177	112
Marion.....	132	685	29	48	336	133	326	345	140	374	405
Martin.....	17	14	15	75	12	15	4	23	81	401	2
Monroe.....	219	498	218	22	41	47	98	185	70	69	12
Nassau.....	147	285	126	44	12	27	159	198	27	34	69
Okaloosa.....	144	890	691	49	25	38	274	188	43	56	49
Okeechobee.....	25	49	25	45	8	7	2	1	48	206	0
Orange.....	443	798	140	674	237	56	376	488	472	2031	42
Osceola.....	21	15	34	3	11	10	29	22	52	25	8
Palm Beach.....	853	9250	412	79	1173	401	2250	3286	6543	2447	415
Pasco.....	166	292	230	1	41	14	104	114	41	91	1
Pinellas.....	825	6575	1782	65	368	636	1492	1071	401	1198	254
Polk.....	444	1263	540	442	312	182	746	943	1485	2362	493
Putnam.....	23	234	17	89	36	35	148	298	151	166	175
St. Johns.....	4	4	1	5	22	2	40	25	21	13	5
St. Lucie.....	38	135	37	165	44	146	2	0	1475	1200	539
Santa Rosa.....	55	186	61	8	29	9	69	76	68	60	0
Sarasota.....	142	1305	4	17	48	366	825	661	712	3094	945
Seminole.....	46	88	26	95	43	17	132	1139	128	339	119
Sumter.....	64	82	77	17	27	5	17	65	111	86	6
Suwannee.....	79	255	186	18	17	20	58	45	26	30	1
Taylor.....	49	248	23	17	17	4	36	66	59	67	0
Union.....	50	2	77	2	6	4	9	6	16	0	0
Volusia.....	275	3972	237	34	122	58	262	427	1505	350	1405
Wakulla.....	43	42	101	29	19	10	47	143	16	33	244
Walton.....	47	74	54	10	27	1	27	30	79	34	1
Washington.....	13	42	11	0	7	0	4	4	33	23	0

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	K. MISCELLANEOUS										M. NURSING HOMES		
	Admissions to Morbidity Service		Field Visits		Office Visits		General Medical Examinations	Health Cards Issued	Vital Statistics Visits	Civil Defense Visits and Conferences	Accident Visits, Incl. Poisoning	Nursing Homes Admitted to Service	Nursing Home Visits
	Under 65	Over 65	Under 65	Over 65	Under 65	Over 65							
	1a	1b	2a	2b	3a	3b	4	5	6	7	8	1	2
Total 1963.....	6851	2169	9052	7178	8950	2409	159441	229628	8250	1660	2773	414	5982
Alachua.....	437	36	402	239	370	47	337	3732	9	1	189	2	25
Baker.....	61	15	92	19	105	84	3	141	0	40	0	0	0
Bay.....	0	3	0	8	0	0	0	2098	78	23	44	4	54
Bradford.....	16	5	6	4	13	1	15	270	91	5	3	1	2
Brevard.....	22	3	87	6	13	2	0	3729	8	42	19	8	56
Broward.....	80	13	155	20	49	8	578	22607	12	1	150	25	321
Calhoun.....	105	5	17	5	164	18	60	147	5	0	0	0	0
Charlotte.....	18	17	119	81	102	106	0	1125	3	142	1	0	0
Citrus.....	9	14	5	12	17	15	65	427	9	31	0	0	0
Clay.....	111	22	159	50	31	1	31	285	89	8	1	2	2
Collier.....	75	12	161	28	74	7	67	1161	36	11	11	0	0
Columbia.....	36	29	70	51	24	18	13	277	14	5	0	0	0
Dade.....	52	23	245	117	2	0	150922	22497	50	26	441	50	1233
DeSoto.....	1	0	11	0	0	0	7	378	19	17	5	0	0
Dixie.....	81	1	51	0	116	1	1	244	94	1	3	1	13
Duval.....	27	8	25	16	26	5	2	11618	0	3	349	53	536
Escambia.....	97	92	804	408	125	37	1196	10919	11	11	198	9	86
Flagler.....	32	6	207	71	244	88	257	290	24	31	0	0	0
Franklin.....	55	37	33	49	46	28	33	1360	14	4	0	0	0
Gadsden.....	43	3	43	3	57	5	115	1030	1388	0	0	0	0
Gilchrist.....	204	38	157	80	423	197	0	84	0	0	1	0	0
Glades.....	97	25	134	54	256	42	7	63	0	4	0	0	0
Gulf.....	79	24	45	16	101	25	19	362	328	1	2	0	0
Hamilton.....	58	22	24	50	134	58	2	259	0	6	0	4	4
Hardee.....	46	11	33	12	24	6	0	444	5	35	0	1	2
Hendry.....	160	32	262	55	423	99	9	403	30	8	2	0	0
Hernando.....	7	7	6	2	5	14	177	565	1	2	0	1	3
Highlands.....	43	15	74	34	23	11	1	410	6	1	3	1	8
Hillsborough.....	310	270	536	733	33	15	763	42658	3	26	473	32	1312
Holmes.....	7	10	3	6	33	5	45	246	4	21	1	2	16
Indian River.....	31	2	100	16	4	0	57	878	2	0	1	2	47
Jackson.....	46	20	36	47	42	16	64	594	62	1	0	0	0
Jefferson.....	18	8	27	38	11	1	26	171	49	1	0	1	10
Lafayette.....	15	30	30	112	37	48	0	19	3	4	0	0	0
Lake.....	8	2	10	1	3	1	11	890	18	0	6	6	21
Lee.....	75	21	29	16	157	54	761	5011	0	63	30	5	19
Leon.....	452	58	644	149	349	34	140	3342	2	0	45	2	6
Levy.....	117	20	80	1	121	37	187	623	10	0	12	3	32
Liberty.....	38	0	5	0	52	0	93	108	45	0	0	0	0
Madison.....	13	6	21	37	6	21	340	4507	13	14	65	11	96
Manatee.....	84	54	188	359	76	0	126	2269	190	12	21	2	18
Marion.....	17	0	89	0	6	0	0	0	12	14	3	0	0
Martin.....	0	17	0	24	0	24	0	0	55	62	10	3	22
Monroe.....	196	42	105	49	189	42	51	1569	181	33	6	0	0
Nassau.....	64	11	70	10	17	4	38	721	8	21	1	0	0
Okaloosa.....	176	50	395	586	593	208	26	2007	8	15	1	1	5
Okeechobee.....	1	0	0	0	1	0	0	179	0	0	148	30	329
Orange.....	194	4	176	8	142	0	23	4727	14	145	0	7	22
Osceola.....	5	2	6	2	8	0	27	899	0	0	0	7	79
Palm Beach.....	385	71	737	292	353	36	469	12450	30	7	277	16	7
Pasco.....	91	51	106	138	78	37	0	2075	4	12	1	7	97
Pinellas.....	822	288	1843	983	1133	93	1276	31460	0	536	79	41	691
Polk.....	770	85	445	162	1160	67	49	8611	72	36	47	26	145
Putnam.....	324	123	247	313	691	273	3	874	1	8	0	3	13
St. Johns.....	48	7	25	6	43	3	0	0	3	30	0	10	11
St. Lucie.....	0	0	0	0	0	0	0	1080	12	18	3	4	26
Santa Rosa.....	81	15	48	17	123	43	254	507	1	25	5	0	0
Sarasota.....	64	99	273	788	5	0	0	2417	5	13	127	7	67
Seminole.....	49	15	44	16	94	13	9	658	29	1	6	7	58
Sumter.....	53	29	23	13	62	28	2	456	4	9	1	1	9
Suwannee.....	102	49	91	165	190	302	3	311	0	13	0	0	0
Taylor.....	43	30	25	24	43	24	0	563	5	1	1	0	0
Union.....	52	18	9	2	71	22	45	72	14	1	30	21	467
Volusia.....	35	127	203	611	41	34	0	7139	51	1	0	0	0
Wakulla.....	8	1	4	1	6	0	13	331	17	0	1	0	0
Walton.....	4	2	1	1	4	1	87	568	2	41	0	0	0
Washington.....	1	9	0	16	1	4	142	260	3	9	0	1	11

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	P. SANITATION											
	Water						Sewage					
	Public Water Systems 1		Private Water Plants 2		Bottled Water Plants 3		Public Sewerage Systems 4		Private Sewerage Systems 5		New Specification Septic Tanks Ins. 6	
	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits
Total 1963.....	3085	13818	8180	13904	44	219	1055	9251	429	2657	24050	36198
Alachua.....	162	299	37	98	1	5	37	176	1	3	278	409
Baker.....	23	43	17	18	0	0	1	13	1	1	37	76
Bay.....	30	272	61	163	0	0	6	22	1	1	286	534
Bradford.....	4	17	9	14	0	0	2	13	0	0	100	101
Brevard.....	35	211	55	175	10	12	73	437	5	30	3271	3655
Broward.....	91	702	656	708	3	13	35	908	86	1146	2028	2808
Calhoun.....	6	63	3	38	0	0	0	0	0	0	53	108
Charlotte.....	5	101	217	495	0	0	4	32	2	24	340	340
Citrus.....	24	82	81	96	2	3	15	30	26	33	22	22
Clay.....	4	45	10	16	0	0	4	25	4	7	84	163
Collier.....	28	62	37	35	0	0	15	67	2	17	30	202
Columbia.....	6	11	8	12	0	0	4	14	1	7	108	391
Dade.....	227	1811	790	1459	4	59	83	601	1	1	0	0
DeSoto.....	4	17	30	41	0	0	6	8	0	0	16	33
Dixie.....	25	63	12	14	0	0	1	5	1	1	6	6
Duval.....	5	24	67	78	2	4	73	353	18	124	258	352
Escambia.....	30	459	726	901	0	0	77	684	0	0	1310	1772
Flagler.....	4	26	14	19	0	0	0	0	1	1	18	36
Franklin.....	6	109	21	63	0	0	5	113	0	0	2	4
Gadsden.....	22	156	31	55	0	0	8	28	1	2	75	134
Gilchrist.....	0	0	0	0	0	0	0	0	0	0	17	104
Glades.....	1	42	5	16	0	0	2	4	1	9	21	52
Gulf.....	12	68	67	139	0	0	2	11	2	3	56	140
Hamilton.....	14	63	14	21	0	0	1	1	0	0	19	93
Hardee.....	16	83	54	132	0	0	2	13	1	2	96	207
Hendry.....	3	60	2	5	0	0	1	15	1	1	78	119
Hernando.....	12	17	26	32	0	0	10	16	9	10	5	6
Highlands.....	13	24	33	41	0	0	3	8	6	6	286	372
Hillsborough.....	181	718	971	1237	1	4	34	954	2	12	952	1222
Holmes.....	5	7	7	9	0	0	2	13	2	4	25	52
Indian River.....	2	4	2	2	2	7	5	26	4	10	30	37
Jackson.....	12	115	40	84	0	0	7	41	0	0	55	115
Jefferson.....	27	51	19	30	0	0	3	8	2	2	7	34
Lafayette.....	19	34	7	7	0	0	0	0	0	0	8	8
Lake.....	29	114	56	102	0	0	1	2	1	1	558	1108
Lee.....	12	23	0	0	2	6	17	85	2	2	487	487
Leon.....	182	249	10	49	0	0	7	18	0	0	350	551
Levy.....	22	57	43	78	0	0	3	4	1	2	102	126
Liberty.....	13	353	3	5	0	0	1	2	2	3	8	15
Madison.....	32	123	14	23	0	0	1	11	0	0	5	17
Manatee.....	445	1054	739	914	2	17	83	375	0	0	625	864
Marion.....	46	113	39	64	0	0	7	18	7	23	606	735
Martin.....	34	94	47	118	0	0	10	140	1	5	523	970
Monroe.....	1	14	8	26	0	0	6	73	9	57	13	200
Nassau.....	2	6	5	9	0	0	1	5	2	2	80	250
Okaloosa.....	10	91	25	53	0	0	6	72	5	9	255	364
Okeechobee.....	3	51	21	49	0	0	2	27	0	0	110	201
Orange.....	241	1582	21	118	1	3	96	1087	81	632	1435	2419
Osceola.....	6	17	5	6	1	2	4	21	4	14	50	68
Palm Beach.....	99	681	788	960	1	4	4	120	20	73	2121	2740
Pasco.....	9	19	13	21	1	3	0	0	0	0	560	1007
Pinellas.....	132	1198	106	219	2	31	162	1958	60	233	1422	2143
Polk.....	250	494	330	492	0	0	23	151	13	56	1255	1935
Putnam.....	37	53	96	133	1	1	1	1	1	3	164	265
St. Johns.....	8	12	43	88	0	0	18	31	19	50	5	7
St. Lucie.....	14	129	254	351	1	17	6	48	0	0	385	665
Santa Rosa.....	4	17	103	106	0	0	3	32	1	2	86	98
Sarasota.....	53	365	1073	3169	3	4	28	133	7	11	990	2879
Seminole.....	37	221	23	102	0	0	16	108	0	0	480	495
Sumter.....	21	210	10	60	0	0	2	3	0	0	46	87
Suwannee.....	1	4	0	0	0	0	2	5	0	0	18	32
Taylor.....	45	90	63	123	0	0	1	4	2	2	22	28
Union.....	4	18	3	8	0	0	2	6	3	3	12	59
Volusia.....	136	383	42	64	4	24	13	44	3	6	1133	1903
Wakulla.....	34	53	45	67	0	0	6	20	4	11	58	93
Walton.....	6	8	14	15	0	0	2	4	0	0	73	122
Washington.....	4	63	4	4	0	0	1	4	0	0	36	58

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	P. SANITATION (Continued)											
	Sewage		Miscellaneous									
	New Specifi- cation Privies Installed		Garbage Disposal Systems		Sub- division Analysis	Percola- tion & Soil Log Test	Pollution Survey		Bathing Areas Surveyed		Public Swimming Pools	
	7		8		9	10	11		12		13	
	Admitted	Visits	Admitted	Visits	Number	Number	Admitted	Visits	Admitted	Visits	Admitted	Visits
Total 1963.....	275	449	346	3999	262	14975	280	3903	169	918	2566	17263
Alachua.....	0	0	18	114	11	895	0	0	2	11	24	143
Baker.....	0	2	2	4	0	1	0	0	0	0	1	6
Bay.....	0	0	0	0	3	212	2	6	0	0	56	264
Bradford.....	0	0	4	76	0	3	3	5	0	0	7	38
Brevard.....	1	1	8	72	8	2454	11	1322	1	4	21	151
Broward.....	0	0	18	16	58	16	52	149	0	0	628	2964
Calhoun.....	0	0	1	5	0	0	0	0	0	0	0	0
Charlotte.....	0	0	3	38	9	47	4	57	2	2	3	33
Citrus.....	1	1	5	13	0	5	10	30	2	5	4	16
Clay.....	0	0	3	7	1	200	4	6	1	7	0	0
Collier.....	0	2	2	9	0	2	1	19	0	0	9	35
Columbia.....	0	0	1	86	0	2	0	0	0	0	4	14
Dade.....	0	0	3	3	0	0	19	180	27	304	770	5822
DeSoto.....	0	0	0	0	0	0	0	0	0	0	2	2
Dixie.....	0	0	1	1	0	26	1	12	0	0	0	0
Duval.....	0	0	40	1017	40	3605	3	13	0	0	16	18
Escambia.....	59	170	0	0	7	184	3	80	6	77	27	485
Flagler.....	0	0	3	18	1	0	1	86	0	0	1	1
Franklin.....	0	0	7	97	0	18	0	0	0	0	0	0
Gadsden.....	56	58	6	114	1	11	1	29	2	5	3	16
Gilchrist.....	0	0	1	47	0	0	0	0	0	0	2	5
Glades.....	0	0	1	1	0	0	0	0	5	5	0	0
Gulf.....	0	0	4	4	0	1	0	0	0	0	0	0
Hamilton.....	3	11	3	53	0	2	0	0	0	0	2	3
Hardee.....	1	2	2	29	0	0	0	3	0	0	1	3
Hendry.....	1	1	4	24	0	0	6	11	0	0	2	2
Hernando.....	0	0	3	6	0	2	0	0	0	0	5	19
Highlands.....	58	75	2	8	2	155	5	620	3	3	40	1036
Hillsborough.....	13	15	29	232	3	76	0	0	0	0	0	0
Holmes.....	0	0	1	4	0	42	1	13	3	5	10	100
Indian River.....	1	1	1	5	3	40	0	0	0	0	4	7
Jackson.....	0	0	3	8	0	2	0	2	0	15	2	6
Jefferson.....	0	0	5	41	0	32	1	7	0	0	0	0
Lafayette.....	0	0	1	7	0	73	4	5	0	0	3	5
Lake.....	0	0	0	0	6	23	0	10	1	1	48	69
Lee.....	1	1	5	14	0	0	2	0	0	0	25	62
Leon.....	0	0	5	29	0	0	0	0	0	0	0	0
Levy.....	5	9	6	16	1	0	2	7	0	0	0	0
Liberty.....	0	0	0	0	0	2	0	0	0	0	0	0
Madison.....	0	0	5	12	0	1	1	0	0	0	2	6
Manatee.....	3	4	3	11	3	50	3	32	2	21	18	132
Marion.....	2	3	48	340	6	153	0	9	26	9	24	24
Martin.....	0	0	1	8	3	444	8	31	0	0	7	10
Monroe.....	0	0	8	61	1	0	22	375	1	7	22	83
Nassau.....	1	1	3	17	2	14	13	20	0	0	15	63
Okaloosa.....	1	1	3	39	1	381	1	18	2	2	10	27
Okeechobee.....	0	0	1	5	0	78	0	0	0	0	2	9
Orange.....	1	1	9	377	12	1779	35	188	5	69	33	663
Osceola.....	0	0	2	80	1	21	0	0	1	1	1	6
Palm Beach.....	1	2	3	15	12	19	5	28	0	0	227	2276
Pasco.....	0	0	3	8	2	39	3	196	3	15	5	42
Pinellas.....	33	36	6	263	15	2424	8	93	11	170	212	1375
Polk.....	2	3	6	119	7	364	19	56	37	83	58	167
Putnam.....	0	0	12	126	0	0	0	0	0	0	8	7
St. Johns.....	2	2	9	52	4	17	8	50	1	1	7	7
St. Lucie.....	0	0	3	28	0	213	5	50	0	0	25	167
Santa Rosa.....	0	0	4	46	2	36	1	7	1	5	3	5
Sarasota.....	0	0	0	5	21	290	5	91	1	11	22	198
Seminole.....	0	0	7	39	3	277	0	0	22	27	8	25
Sumter.....	2	2	0	0	0	21	0	0	0	0	4	43
Suwannee.....	4	4	0	0	4	96	0	0	0	0	5	13
Taylor.....	0	0	4	24	1	26	0	0	2	3	12	18
Union.....	7	23	1	18	3	8	1	1	0	0	1	1
Volusia.....	0	0	7	42	5	50	4	44	6	21	121	560
Wakulla.....	8	7	0	0	0	2	0	0	11	11	2	2
Walton.....	7	7	0	0	0	90	0	0	1	1	3	3
Washington.....	1	3	2	46	0	0	0	0	0	0	2	4

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	P. SANITATION (Continued)											
	MISCELLANEOUS											
	Schools 14		Mobile Home Parks 15		Camps 16		Tourist Courts or Motels 17		Child Care Centers 18		Complaints Investigated 19	
	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits
Total 1963	1603	4200	1460	9760	556	5544	366	904	1391	5035	32712	72141
Alachua	34	68	41	91	22	60	36	42	15	179	353	699
Baker	10	40	4	12	0	0	2	2	0	0	21	39
Bay	8	14	51	143	2	19	16	98	0	0	134	273
Bradford	3	7	1	1	2	7	4	13	1	1	47	54
Brevard	15	45	74	524	3	4	2	14	9	23	1254	2055
Broward	169	302	114	414	8	80	0	0	207	659	2791	4535
Calhoun	5	34	1	3	0	0	0	0	0	0	6	10
Charlotte	8	41	10	88	1	16	5	46	1	1	116	288
Citrus	4	5	6	12	2	3	7	8	0	0	35	49
Clay	10	46	7	38	2	26	2	6	0	0	16	38
Collier	2	3	6	17	34	184	2	7	0	0	88	351
Columbia	3	21	2	2	1	1	2	4	0	0	20	34
Dade	268	582	29	227	54	3157	1	1	173	296	7552	17439
DeSoto	6	20	0	0	0	0	1	1	2	2	48	101
Dixie	3	6	0	0	1	2	3	3	0	0	8	8
Duval	52	106	16	62	1	4	14	30	154	202	1885	4219
Escambia	94	95	96	271	4	2	3	4	53	140	3733	8592
Flagler	0	0	5	33	5	10	2	2	0	0	51	116
Franklin	3	37	7	46	1	2	1	1	0	0	82	130
Gadsden	15	134	2	12	4	18	7	27	0	1	9	9
Gilchrist	0	0	0	0	0	0	0	0	1	1	9	9
Glades	1	35	1	9	6	32	1	2	0	0	17	23
Gulf	9	18	5	20	0	0	0	0	0	0	32	122
Hamilton	3	3	1	4	1	1	1	1	0	0	15	20
Hardee	3	13	6	19	7	39	0	0	0	0	9	29
Hendry	5	19	8	39	11	67	2	11	0	0	30	57
Hernando	1	1	2	3	2	3	4	4	0	0	40	73
Highlands	1	4	17	113	12	25	2	3	3	3	40	78
Hillsborough	110	379	91	828	34	398	3	53	198	1529	2322	5693
Holmes	9	43	0	0	0	0	0	0	0	0	13	19
Indian River	5	46	1	16	6	20	1	1	0	0	123	251
Jackson	5	20	2	2	2	9	8	19	0	0	10	42
Jefferson	1	3	2	2	0	0	0	0	9	9	18	66
Lafayette	2	3	0	0	0	0	0	0	0	0	2	2
Lake	10	15	18	50	7	24	4	5	4	6	107	213
Lee	34	62	16	40	3	6	1	4	13	14	161	217
Leon	26	52	28	81	6	20	43	74	40	114	295	636
Levy	10	35	0	0	0	0	1	3	0	0	30	34
Liberty	3	25	0	0	3	12	1	2	0	0	3	6
Madison	0	0	2	3	0	0	2	3	0	0	6	7
Manatee	30	135	58	202	9	53	85	131	10	35	591	913
Marion	49	125	16	78	10	35	25	64	6	19	493	637
Martin	0	0	12	53	0	0	0	0	0	0	93	177
Monroe	12	48	55	110	2	12	5	17	8	24	180	319
Nassau	2	35	4	9	1	1	5	20	0	0	39	97
Okaloosa	17	38	2	3	1	9	1	1	8	8	197	228
Okeechobee	3	7	14	101	1	1	0	0	0	0	12	22
Orange	94	307	115	1130	5	101	2	24	113	490	1117	5316
Osceola	4	8	8	26	6	14	2	3	1	2	90	166
Palm Beach	53	82	20	61	177	555	1	1	123	670	1894	3779
Pasco	7	31	16	52	13	41	7	15	0	0	110	143
Pinellas	133	378	270	3785	3	101	1	2	14	24	4052	8814
Polk	81	140	37	221	20	159	3	34	106	298	622	1333
Putnam	10	29	10	38	15	56	0	0	8	13	60	109
St. Johns	4	10	12	17	15	20	0	0	1	3	69	139
St. Lucie	11	13	29	367	7	60	0	0	19	58	117	183
Santa Rosa	14	24	3	7	3	0	0	0	1	1	23	37
Sarasota	12	41	27	77	2	31	5	10	51	149	698	1444
Seminole	22	82	7	23	6	10	0	0	6	18	162	297
Sumter	12	50	6	23	0	0	13	19	0	0	35	50
Suwannee	2	2	2	20	0	0	3	25	5	14	17	25
Taylor	7	15	1	1	0	0	13	27	0	0	32	48
Union	2	15	1	2	1	1	3	7	0	0	18	25
Volusia	42	122	52	114	14	31	5	6	18	25	377	1082
Wakulla	6	6	8	8	0	0	0	0	0	0	28	58
Walton	14	48	3	6	1	2	2	2	1	1	29	34
Washington	5	27	0	0	0	0	1	2	4	4	30	33

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	P. SANITATION (Continued)													
	Miscellaneous (Continued)						Protection of Food and Milk							
	Nuisances Cor- rected 20		Plumbing 21		Rabies Animal Bites 22		Eating and Drinking Establish- ments 23		Food Processing Plants 24		Abattoirs 25		Shellfish and Crustacea 26	
	Number	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	Admitted	Visits	
Total 1963.....	24674	2250	6626	20654	59554	20315	107935	870	5181	181	1284	185	1488	
Alachua.....	301	0	22	479	660	391	1427	34	94	7	15	0	0	
Baker.....	8	0	24	38	94	29	147	1	2	0	0	0	0	
Bay.....	82	0	0	52	108	213	1005	0	0	0	0	13	228	
Bradford.....	29	0	0	74	113	41	321	0	0	0	0	0	0	
Brevard.....	857	0	3	696	1596	482	2377	5	56	1	1	4	17	
Broward.....	1939	0	67	1695	3916	1600	4302	38	94	3	7	0	0	
Calhoun.....	22	0	0	4	4	34	234	0	0	0	0	0	0	
Charlotte.....	83	0	0	61	92	14	325	5	24	0	0	3	102	
Citrus.....	21	0	0	9	20	38	56	2	2	0	0	6	18	
Clay.....	12	0	1	42	95	61	227	2	3	1	4	0	0	
Collier.....	28	0	0	87	188	82	311	1	2	1	2	7	15	
Columbia.....	9	0	0	58	137	115	583	1	1	1	2	0	0	
Dade.....	3563	0	0	4803	17597	4311	23661	178	1328	71	433	0	0	
DeSoto.....	18	0	0	35	52	28	58	5	11	2	7	0	0	
Dixie.....	2	0	0	16	16	30	51	0	0	0	0	6	43	
Duval.....	1680	0	3	1344	1344	651	1807	12	28	1	1	7	121	
Escambia.....	2653	2243	6448	1329	4806	670	4706	33	312	3	18	7	96	
Flagler.....	0	0	0	13	36	82	101	1	3	0	0	0	0	
Franklin.....	36	0	0	10	28	33	223	3	6	0	0	0	0	
Gadsden.....	110	0	0	13	21	100	472	1	43	1	9	1	4	
Gilchrist.....	8	0	0	6	6	6	143	0	0	0	0	0	0	
Glades.....	7	0	0	11	26	26	78	0	0	0	0	0	0	
Gulf.....	38	0	0	17	43	49	451	2	12	0	0	1	13	
Hamilton.....	7	0	0	18	45	38	104	0	0	1	1	0	0	
Hardee.....	4	0	0	18	31	21	69	1	5	2	5	0	0	
Hendry.....	24	0	0	22	53	37	112	0	0	1	6	0	0	
Hernando.....	10	0	0	6	7	39	61	0	0	0	0	0	0	
Highlands.....	19	0	0	58	102	202	283	1	1	0	0	0	0	
Hillsborough.....	4282	0	0	3134	14040	1921	24906	54	739	38	513	11	154	
Holmes.....	11	0	0	9	16	57	337	0	0	0	0	0	0	
Indian River.....	20	0	0	26	79	132	549	2	50	0	0	3	12	
Jackson.....	14	0	0	14	30	99	501	5	10	3	5	0	0	
Jefferson.....	20	0	0	25	48	3	11	0	0	2	15	2	2	
Lafayette.....	3	0	0	0	0	7	25	0	0	0	0	0	0	
Lake.....	50	0	0	41	79	182	525	3	8	0	0	0	0	
Lee.....	75	0	0	205	175	422	1116	12	24	0	0	12	68	
Leon.....	207	0	0	386	1394	275	1745	10	33	3	31	0	0	
Levy.....	25	2	2	33	73	91	109	2	6	0	0	19	60	
Liberty.....	2	0	0	0	0	15	101	1	1	0	0	0	0	
Madison.....	1	0	0	18	57	44	124	0	0	1	4	0	0	
Manatee.....	518	0	0	269	449	321	1145	36	257	6	41	2	16	
Marion.....	359	0	0	200	404	166	590	5	7	2	14	0	0	
Martin.....	41	0	0	52	100	98	426	3	6	0	0	1	1	
Monroe.....	133	0	6	125	250	168	397	1	3	2	2	0	0	
Nassau.....	17	0	0	36	66	66	288	0	0	1	7	2	10	
Okaloosa.....	92	0	0	327	342	137	544	1	2	1	3	0	0	
Okeechobee.....	13	0	0	24	49	58	399	0	0	0	0	0	0	
Orange.....	767	0	0	965	1987	426	2557	49	383	5	9	2	2	
Osceola.....	25	1	2	73	113	44	103	2	2	0	0	0	0	
Palm Beach.....	1004	0	0	655	537	1250	3723	36	77	1	3	0	2	
Pasco.....	95	0	1	60	169	197	825	9	53	1	2	2	2	
Pinellas.....	3705	0	1	550	1381	1666	10861	120	692	5	58	6	14	
Polk.....	387	3	41	870	2070	718	4379	54	256	2	14	0	0	
Putnam.....	24	0	0	25	58	163	227	3	6	1	1	2	1	
St. Johns.....	16	0	0	36	69	77	130	5	5	1	11	2	3	
St. Lucie.....	110	0	0	150	542	209	2038	10	105	1	1	8	1	
Santa Rosa.....	25	0	0	83	127	71	180	0	0	0	0	6	9	
Sarasota.....	724	0	0	463	1788	386	961	73	151	0	0	0	0	
Seminole.....	61	0	0	189	324	164	463	13	64	0	0	0	0	
Sumter.....	22	1	5	20	51	59	178	1	12	0	0	0	0	
Suwannee.....	11	0	0	9	21	70	647	1	5	4	16	4	1	
Taylor.....	19	0	0	29	59	64	130	1	4	0	0	0	0	
Union.....	9	0	0	3	4	19	102	0	0	1	1	0	0	
Volusia.....	171	0	0	449	1229	871	2302	30	181	2	20	13	3	
Wakulla.....	13	0	0	29	36	42	66	1	5	0	0	16	13	
Walton.....	16	0	0	25	53	78	331	1	7	0	0	6	1	
Washington.....	17	0	0	33	49	53	199	0	0	1	1	0	0	

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	P. SANITATION (Continued)									
	Protection of Food and Milk (Continued)									
	Grocery and Meat Markets		Other Food Establishments		Food Handlers Trained	Dairy Farms		Milk and Milk Products Plants	Cows Banged Tested	Cows Tuberculin Tested
	27	28	29	30	31	32	33	34	35	36
	Admitted	Visits	Admitted	Visits	Number	Admitted	Visits	Admitted	Visits	Number
Total 1963.....	6129	37945	1425	10826	3381	735	10375	408	7682	1095
Alachua.....	234	605	9	11	382	10	68	3	29	1
Baker.....	16	107	1	1	0	4	50	0	0	0
Bay.....	54	206	15	44	0	2	36	2	10	0
Bradford.....	24	237	0	0	0	3	31	3	31	0
Brevard.....	99	604	7	20	0	3	21	8	62	0
Broward.....	449	1359	25	60	0	7	20	14	93	0
Calhoun.....	4	10	0	0	0	10	189	0	0	0
Charlotte.....	28	221	3	3	0	0	0	0	0	0
Citrus.....	0	0	0	0	0	0	0	0	0	0
Clay.....	19	114	0	0	0	7	83	1	12	0
Collier.....	3	29	1	1	0	0	0	0	0	0
Columbia.....	13	36	5	5	0	1	9	2	25	0
Dade.....	1111	6687	552	4445	1853	89	857	161	3394	0
DeSoto.....	13	29	6	11	0	2	29	0	0	0
Dixie.....	0	0	0	0	0	0	0	0	0	0
Duval.....	354	1058	42	69	0	0	0	0	0	0
Escambia.....	220	1485	25	121	103	60	1229	5	24	14
Flagler.....	4	9	0	0	0	2	4	0	0	0
Franklin.....	9	10	0	0	0	0	0	0	0	0
Gadsden.....	13	13	0	0	0	3	79	0	0	0
Gilchrist.....	0	0	0	0	0	0	0	0	0	0
Glades.....	4	6	5	5	0	5	67	1	1	0
Gulf.....	48	410	0	0	0	1	23	0	0	90
Hamilton.....	1	1	0	0	0	0	0	0	0	0
Hardee.....	1	6	3	5	0	4	44	2	2	0
Hendry.....	7	17	2	2	0	7	60	0	0	0
Hernando.....	0	0	0	0	0	0	0	0	0	0
Highlands.....	26	50	0	0	0	2	35	1	4	0
Hillsborough.....	763	12261	448	4750	168	86	2631	18	842	0
Holmes.....	20	129	0	0	0	16	194	0	0	633
Indian River.....	38	131	1	2	0	6	42	1	6	0
Jackson.....	3	3	0	0	0	27	232	7	32	0
Jefferson.....	2	2	1	1	0	9	116	2	20	242
Lafayette.....	2	2	0	0	0	19	320	0	0	1891
Lake.....	36	82	1	1	0	12	79	3	3	0
Lee.....	123	145	7	10	0	6	60	5	51	0
Leon.....	171	615	5	20	0	12	74	8	47	52
Levy.....	21	22	0	0	0	1	1	1	1	0
Liberty.....	0	0	0	0	0	0	0	0	0	0
Madison.....	0	0	0	0	0	7	109	2	6	628
Manatee.....	94	350	3	5	0	27	382	10	62	4104
Marion.....	22	78	3	4	0	25	201	2	10	1247
Martin.....	24	129	0	0	0	6	96	3	21	4786
Monroe.....	16	52	3	8	0	0	0	3	14	0
Nassau.....	10	41	1	2	10	2	2	0	0	0
Okaloosa.....	35	49	5	5	10	2	24	1	1	38
Okeechobee.....	28	198	0	0	0	27	315	2	22	19604
Orange.....	74	1001	113	604	14	21	235	22	394	0
Osceola.....	4	4	1	1	0	6	44	0	0	0
Palm Beach.....	327	1168	38	113	0	39	152	24	977	0
Pasco.....	22	70	4	8	0	16	253	1	7	0
Pinellas.....	626	3083	52	371	122	12	143	46	1053	761
Polk.....	341	1821	17	75	467	39	491	2	30	5449
Putnam.....	52	156	2	7	0	6	31	1	1	0
St. Johns.....	12	15	0	0	0	0	0	6	10	0
St. Lucie.....	91	1242	2	2	0	5	60	6	60	1612
Santa Rosa.....	0	0	0	0	0	19	74	0	0	772
Sarasota.....	68	117	9	11	0	3	53	6	25	848
Seminole.....	78	125	0	0	0	6	129	0	0	1184
Sumter.....	13	84	1	4	0	7	88	0	0	193
Suwannee.....	15	20	0	0	0	5	53	1	15	24
Taylor.....	10	12	0	0	0	0	0	1	2	0
Union.....	15	99	0	0	0	3	24	0	0	0
Volusia.....	153	1114	3	8	272	17	429	18	274	0
Wakulla.....	4	5	3	6	0	0	0	0	0	0
Walton.....	32	98	1	5	0	9	53	3	9	488
Washington.....	24	108	0	0	0	10	251	0	0	430

TABLE 14 (Continued)
MAJOR ACTIVITIES OF LOCAL HEALTH UNITS, FLORIDA, 1963

COUNTY	P. SANITATION (Continued)				V. HEALTH EDUCATION								X. LAB.
	Private Premises 35		Public Premises 36		Meetings Attended Spectator 1	Meetings Attended Participant 2	Talks Made 3	Conferences 4	Programs Using Audio-Visual Aids 5	Radio and TV Programs 6	News Articles, Preparation and/or Publication 7	Exhibits Prepared and/or Set Up 8	Specimens Examined 1-22
	Admitted	Visits	Admitted	Visits									
Total 1963.....	68888	134473	21203	57579	10984	9710	7579	48083	4648	347	2200	498	716476
Alachua.....	175	724	130	1769	250	271	138	1267	526	37	26	1	11516
Baker.....	35	41	1	20	14	6	9	12	5	0	31	0	889
Bay.....	466	652	20	52	50	68	93	420	9	0	0	10	10104
Bradford.....	5	5	0	0	102	44	32	78	3	1	20	0	1588
Brevard.....	1032	1329	66	363	254	265	56	5853	24	4	24	9	13242
Broward.....	993	1827	238	682	235	235	297	4757	72	30	278	22	41927
Calhoun.....	2	9	5	39	29	15	20	217	25	4	3	1	1659
Charlotte.....	35	82	41	471	138	215	182	1870	63	2	79	14	5889
Citrus.....	56	57	4	7	23	62	26	94	18	0	2	0	1247
Clay.....	35	128	39	135	80	138	39	608	33	2	15	28	2039
Collier.....	6	12	11	15	174	109	55	107	7	9	20	0	3473
Columbia.....	74	124	25	85	45	17	8	1014	0	2	4	0	2816
Dade.....	15694	21351	15230	24230	1032	1795	918	1953	155	39	80	51	89618
DeSoto.....	57	106	20	72	25	26	0	121	6	2	9	10	1598
Dixie.....	17	23	9	24	20	11	10	192	0	0	3	2	1111
Duval.....	3714	7305	263	1056	263	145	44	154	67	4	27	3	19020
Escambia.....	29171	29338	1769	2188	327	259	286	396	1044	0	25	6	39371
Flagler.....	4	5	5	45	12	11	3	58	7	1	10	0	1548
Franklin.....	23	57	7	112	25	19	4	188	1	0	2	1	3277
Gadsden.....	44	81	28	52	56	96	58	2204	30	0	33	7	7745
Gilchrist.....	1	1	0	0	14	31	26	634	5	0	2	1	1191
Glades.....	52	237	9	54	24	11	9	85	7	0	14	2	796
Gulf.....	167	258	34	79	28	31	23	177	3	1	4	1	1974
Hamilton.....	13	25	2	2	24	32	18	164	11	1	15	1	1261
Hardee.....	82	148	27	69	30	77	18	432	35	0	0	0	2983
Hendry.....	161	578	31	172	90	71	43	400	10	23	28	13	2748
Hernando.....	79	122	1	1	11	2	6	123	7	2	3	0	918
Highlands.....	65	80	22	134	97	57	6	283	0	0	108	0	2908
Hillsborough.....	5099	24247	463	3937	1577	960	577	849	131	37	155	30	122297
Holmes.....	15	17	0	0	25	48	31	185	30	9	25	1	3520
Indian River.....	103	526	13	134	145	130	133	270	61	3	30	3	3461
Jackson.....	74	119	23	81	108	135	37	315	53	0	12	4	7666
Jefferson.....	54	101	7	12	43	52	60	137	43	0	13	3	6080
Lafayette.....	26	31	13	24	12	2	1	18	1	0	1	0	509
Lake.....	690	1096	90	241	44	30	27	672	26	0	8	5	3512
Lee.....	70	123	178	234	272	60	55	80	19	5	6	7	7897
Leon.....	74	314	58	103	56	53	211	360	42	2	67	13	21569
Levy.....	88	259	19	166	8	72	24	68	6	0	6	0	2692
Liberty.....	7	10	2	7	4	0	0	288	1	0	0	0	2179
Madison.....	7	10	11	52	42	25	23	26	11	1	4	2	2011
Manatee.....	787	1140	115	301	294	130	118	1396	60	0	57	27	15406
Marion.....	337	598	104	375	215	198	132	267	48	12	79	13	8101
Martin.....	524	618	84	507	50	73	57	194	20	1	3	0	1068
Monroe.....	102	218	39	263	93	74	86	1759	27	0	37	6	3595
Nassau.....	31	185	16	64	52	77	27	442	26	7	45	49	2590
Okaloosa.....	47	130	102	469	58	76	78	435	25	0	6	9	6332
Okeechobee.....	33	56	45	213	20	29	8	194	0	0	0	0	1086
Orange.....	710	2400	286	2182	660	396	535	1666	163	11	63	4	22912
Osceola.....	118	247	50	311	41	50	32	61	18	0	29	2	3514
Palm Beach.....	709	912	219	454	1208	431	415	2204	207	8	14	25	40087
Pasco.....	77	213	10	108	28	12	12	61	4	0	2	0	6348
Pinellas.....	3316	29630	437	11666	991	800	1275	4362	675	57	132	41	64336
Polk.....	334	644	57	202	329	201	447	1193	299	4	61	14	28638
Putnam.....	157	171	6	62	68	44	17	29	8	0	3	0	3933
St. Johns.....	23	36	20	328	98	18	12	400	12	0	31	2	4727
St. Lucie.....	763	1080	169	1305	109	119	21	58	1	0	11	1	4595
Santa Rosa.....	10	16	12	41	130	106	162	602	96	1	64	11	4638
Sarasota.....	1679	2826	253	655	294	482	168	3744	78	5	221	22	5825
Seminole.....	93	1384	39	476	112	151	127	1311	115	7	20	6	3672
Sumter.....	135	349	3	17	21	47	26	306	12	0	11	5	2047
Suwannee.....	22	39	1	8	54	49	35	56	19	2	4	3	1626
Taylor.....	65	119	21	38	26	17	13	174	12	1	2	0	1017
Union.....	27	61	18	90	35	6	0	49	0	0	9	0	12100
Volusia.....	126	183	169	507	139	354	117	363	81	8	101	0	2026
Wakulla.....	61	86	4	8	23	42	28	76	33	0	1	1	3825
Walton.....	26	57	5	8	23	27	27	48	12	2	0	0	1866
Washington.....	11	12	5	7	7	11	3	4	0	0	0	0	

BUREAU OF MATERNAL AND CHILD HEALTH

L. L. PARKS, M.D., M.P.H.
Acting Director

Staff changes in the Bureau of Maternal and Child Health (MCH) have been made this year. In October the director was appointed to head the Bureau of Local Health Services but served as acting director of MCH for the remainder of the year. A pediatric consultant was employed as was a migrant health coordinator.

The responsibility of this bureau is to direct efforts toward those programs concerned with the health of mothers and children. The staff is engaged in a number of interesting activities in addition to those special projects which are operated through grants from the Children's Bureau, which are the Migrant Project, the Premature Demonstration Program and the Developmental Evaluation Clinic.

The staff gave special attention to phenylketonuria (PKU) surveys, the biannual premature seminars, orientation sessions on mental retardation, promoting planned parenthood services in the maternity clinics, evaluating the "Teachers Project" course held each summer, and promoting workshops and conferences with health department personnel and schools.

The staff worked with many official and non-official agencies in the state which included the Florida Children's Commission, Florida Congress of Parents and Teachers (and local PTA groups), Florida Medical Association (and local medical societies), Florida Cooperating Council for Children and Youth, State Department of Education, Sunland Training Centers and the Florida Committee on Rural Health, to name a few.

The bureau participated in the summer student training program by accepting a medical student who did creditable work on a research project at the Duval Medical Center. He submitted a formal report which related some significant and interesting findings regarding prenatal care. Students also participated in MCH special projects in other areas of the state.

MATERNAL HEALTH

The number of maternal deaths for the year decreased from 54 in 1962 to 37 for 1963. The provisional maternal mortality rate was 3.2 per 100,000 live births in 1963 as compared with 4.7 recorded in 1962. There was improvement shown in the maternal mortality data for both races.

Two hundred midwives were licensed to practice during the year which was a slight decrease from the 203 for 1962.

The gradual trend away from midwife deliveries and toward physician-hospital births continued for both white and nonwhite. The percentage of deliveries in hospitals for white births was 99.2 in 1962 as compared with 99.0 the previous year. The percentage of nonwhite hospital

deliveries was 83.0 for 1962; whereas, it was 81.2 per cent in 1961. Physicians delivered 99.3 per cent of white babies in 1962 and 99.2 per cent in 1961; for nonwhite babies, physicians delivered 84.5 per cent in 1962 and 82.9 per cent the previous year. Midwives accounted for 14.5 per cent of nonwhite deliveries and 0.6 per cent of white deliveries during 1962.

Illegitimate births numbered 11,149 during 1962, increasing 9.5 per cent of live births in 1961 to 9.7 per cent in 1962. The proportion of white births that were illegitimate in 1962 was 3.1 per cent and the nonwhite percentage was 20.8, which shows that the nonwhite percentage is still about nine times greater than white.

Most of the county health departments (CHD) in the state operate maternity clinics which are open to all expectant mothers who do not have their own physician. Interest in the planned parenthood program is growing and more counties provided this service during the year.

INFANT AND PRESCHOOL HEALTH

The preliminary figures for 1963 show that there were 114,641 births, or a rate of 20.3 per 1000 population. The number of infant deaths reported was 32,007 and the rate was 28 deaths per 1000 live births. Since immaturity is reported as the leading cause of infant death, care of these tiny babies is promoted by the CHDs, with special concern upon preparation of the home for their care upon release from the hospital. Most of the CHDs conduct well baby clinics.

The infant mortality rate for 1963 was 28 per 1000 births as compared with 28.5 for the preceding year; the white rate increased from 22.3 to 22.5 and the nonwhite rate decreased from 45.7 to 43.1.

Immunizations reported by CHDs were as follows: smallpox 102,965, diphtheria 156,804, tetanus 207,504, whooping cough 84,191 and polio 304,381.

HEALTH SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

As in other years, a wave of migratory agricultural workers swept across 40 of Florida's 67 counties during 1963. These migrants, who are estimated to total approximately 100,000 workers (including their dependents), are composed of Negro, Spanish and Anglo cultural groups. Their stay in Florida counties generally varies from one to eight months depending upon the crops they tend, the weather and other attendant factors.

CHDs have long been familiar with the problems created by the impact of large numbers of these workers and their dependents upon the health facilities available. The ratio of public health personnel to population varies from county to county but nowhere does it reach a satisfactory level. This is one reason that migrants who are present in a county for a limited time do not receive the health services that they would if they were not such a mobile population. Also, although the migrant population health needs are great, they have limited opportunity and financial ability to meet these needs. For many, a language barrier hampers their

receiving services, and in general the migrants have an inadequate appreciation of the importance of good health practices.

Other counties in the state, which have not previously been identified with the migrant labor program, this year expressed interest in participating in a federally-financed program to improve health conditions and services for migratory farm workers and their dependents. A request for project grants for migrant family health services was made by the bureau to the U.S. Public Health Service (USPHS), and although the major part of the project costs are paid out of grant funds, counties participating are required to pay a share of the cost. To date three migrant health projects have been approved by the USPHS and these are the MCH program development project, and the Dade and Palm Beach County projects for migrant health services.

Meetings were held during the year with health officers from several counties for the purpose of developing a basic health service program for these workers. It has long been believed by many leaders in public health that the mobility of the migrant population points up the need for effective health service continuity. As migrants move from county to county and state to state, they face the problem of not knowing what health services are available to them. If a basic health service program was adopted by those counties which attract migrants, this problem would be minimized.

As a result of these meetings, a statewide health services index and referral system was developed and will be put into use in several counties in the near future. This system is a catalogue of CHD services available.

During the year shooting was started (and is continuing) on a film sponsored and paid for by the bureau and produced by the Florida Development Commission. This film will have a fourfold purpose: to acquaint the people of Florida with factual background knowledge of migratory farm labor; to identify some of the major health problems existing among them; to describe state and local health services which are currently available to migrants and to identify unmet health needs among this group.

The Children's Bureau has continued to supply funds to assist in bringing health services to migrants and their dependents. These funds are helping to provide 15 health workers in four counties and enable Palm Beach County to bring services to migrants through the use of mobile clinics and night clinics. Because they are unable to attend day-time clinics without loss of wages, these clinics are especially useful in rural areas of counties with appreciable numbers of migrants.

At the annual meeting of the Florida Public Health Association held in Orlando in October, one morning's program was devoted to speakers who discussed migrant labor problems not only in Florida but in other states.

A migrant health coordinator was employed in October. He is a registered sanitarian who has worked in counties having substantial numbers of migrant farm workers. He will endeavor to coordinate public

health activities with the activities of other agencies and organizations concerned with their problems and to aid counties in developing health service continuity.

POSTGRADUATE OBSTETRIC-PEDIATRIC SEMINAR

This year's seminar was held in Daytona Beach, where it had met during the years 1951 through 1960, and an increase in the number of physicians and nurses attending was noted. This is held annually by the Bureaus of Maternal and Child Health of the State Health Departments of Florida, Georgia, South Carolina, Alabama and Mississippi in cooperation with the Maternal Health Committee of the Florida Medical Association, Florida Academy of General Practice and Children's Bureau.

TABLE 15
POSTGRADUATE OBSTETRIC-PEDIATRIC SEMINAR
REGISTRATION BY STATES, 1963

STATE	Doctors	Nurses	Other	Total
Alabama.....	15	5	0	20
Georgia.....	65	1	4	70
South Carolina.....	25	1	0	26
Mississippi.....	5	0	0	5
Other States.....	6	1	0	7
Florida.....	152	39	4	195
TOTALS.....	268	47	8	323

PREMATURE PROGRAM

The premature baby enters the world with the prognosis that the first weeks, even months, of the tiny infant's life will not be easy. During 1962 8.8 per cent of live births were recorded as premature in Florida.

In an effort to combat this problem two five-day seminars were held for nurses at the Premature Demonstration Center (PDC), Jackson Memorial Hospital in Miami for the sixth year, using facilities and personnel from the Center and the Department of Pediatrics, University of Miami School of Medicine. This brings to 369 the number of nurses who have attended these postgraduate training programs started in May 1958. Seventy selected nurses enrolled in these classes from Florida, Georgia, Alabama and South Carolina this year. Policies have been developed in an effort to recruit nurses from hospitals where the most good could come of their attendance. Pediatricians report that the caliber of medical care generally for newborn, both full term and premature, has been improved.

A one-day "crossroads" demonstration clinic was held in Tampa. It was attended by approximately 140 persons in nursing categories including public health nurses. An evening session for physicians drew an

audience of approximately 21 physicians. The team of physicians and nurses from the PDC provided programs for the two groups.

The bureau announced an extension of services to hospitals throughout the state with the intent of supplementing and expanding the present program, and to aid hospitals in adapting the newer knowledge to the practical, everyday aspects of operating their nurseries. Visits to hospitals are made by the pediatric consultant of the bureau who is prepared to consult with nursery personnel, offer teaching literature, give demonstrations of new procedures and equipment, lecture and give attention to problems peculiar to an individual hospital.

To strengthen the understanding of personnel dealing with prematurity, infants and their families, a medical social worker was added to the staff of the PDC during the year. The worker assisted in the Center, in outpatient clinics and with training programs for personnel in related services.

Several factors entered into the decision to continue the training program for physicians and nurses in premature care. These include the tremendous population growth in Florida, the rapid turnover in nursing personnel due to transfer of service personnel at installations in Florida, creation of new facilities for newborns, high percentage of hospital births, continued interest in and demand for training (demonstrated by the number of applications for each seminar) and the interest in the program displayed by the Florida Pediatric Society membership.

SCHOOL HEALTH PROGRAM

Public health education and school health education are interdependent and they are part of the overall community health program. The responsibility for the health of the school-age child rests jointly with the State Board of Health (SBH) and the State Department of Education. The implementation of the charge is vested in the local CHDs and the local boards of public instruction.

New accreditation standards for the public schools call for a complete health appraisal at the first, seventh and tenth grade levels. The organization and administration of meeting this requirement vary from county to county and sometimes within the county. This requirement is predicated on the principle that the family has primary responsibility for the health of the school-age child. Where there is close cooperation and coordination between the family, school, CHD personnel, local medical and dental societies and other professional personnel, the process is smooth.

Vision, hearing and dental screenings continued in the school, and height and weight measurements are done regularly. Some counties carried out special screening programs such as TB testing, finding rheumatic fever cases and in the field of mental health. More emphasis should be placed on screening procedures and schedules to determine what changes are necessary.

The problem of educating the parent to do something about the defect in the child detected by the health appraisal or screening proce-

dures is still a grave one. Workshops, seminars, speeches, films and dissemination of materials have been methods employed in an attempt to accomplish this goal. Extensive work has been done to encourage parents to provide medical care early in the life of their children.

Marked improvement was noted in the functions of the school health coordinators over the state. Some counties have scheduled regular meetings for this group. Better coordination between the schools and outside agencies is resulting because of the emphasis on the school health program and the greater cooperation of the community health resources. The manner in which the dental health guide is being implemented through the school health coordinators reflects the need for competent individuals in this position.

Revision of Bulletin 4-D "A Program of Health Services for Florida Schools" was completed and copies will be available soon. This manual should give invaluable assistance to the school health program personnel. A new health appraisal form MCM 304-B was developed for use in connection with the driver education program in the schools.

Public health nurses continued to do an excellent job in the school health program, acting as resource personnel for teachers and principals. Conferences were held with teachers and parents in an effort to strengthen the referral and follow-up programs. Other public health personnel assist within their own disciplines in the school health program.

The emphasis on physical fitness over the country has brought to the front the unmet need of more and better health education programs. Superintendents, supervisors, principals and teachers admit the gross lack of health education, principally in the secondary schools, colleges and universities.

HEALTH PROJECT IN TEACHER EDUCATION

The project completed its eighth annual session the summer of 1963 with 65 teachers coming from 27 counties. Participating universities and their enrollments were: Florida State University, 13; Florida A and M University, 3; University of Florida, 10; University of Miami, 8, and University of South Florida, 31. Newcomers in the program were the University of South Florida and Florida A and M University, and a participant of long standing, Bethune-Cookman College, dropped out because of a small enrollment.

The purposes of the course are to offer teachers the opportunity to become better acquainted with the personnel, activities and resources of their CHDs and other official and voluntary health agencies; the opportunity to increase their knowledge and understanding of health problems in the county and the state, by direct experience with community health programs and problems; plus the opportunity to gain credits to meet certain certification requirements.

The course is enthusiastically acclaimed by all the participants and CHDs. Teachers stated this course gave them more practical information than other college courses in the same area. Teachers and CHD personnel

alike have become better acquainted with the many facets that are involved in a school health program by a better understanding of the duties and responsibilities of each other in the multiphasic approach to health.

The four-weeks course carries three hours college credit. Two days are spent on the campus at the beginning of the course for the purpose of registration and orientation on the philosophy of public health, voluntary and other health agencies at the state level. The next three weeks are spent in the respective CHDs where the teacher follows the department's experiences to meet the purposes of the course. A teacher enrolls from the county where he will be teaching the ensuing year. After their experiences in the CHD, two days are spent on the university campus for an evaluation phase. At this time an attempt is made to show relationships between their experiences at the CHD and their individual school situation.

This course has been improved annually since it was initiated in 1955. But one phase that needs further consideration is how to get information on the benefits of this course to more teachers willing to participate. Much effort has been put toward the goal of wider participation but more publicity is needed.

MENTAL RETARDATION

The bureau is concerned with the entire field of mental retardation and is active in certain aspects of the problem. Ongoing activities include orientation talks and programs at the several Sunland Training Centers. These are two-day programs held regularly in cooperation with the personnel of the centers and the SBH in addition to representatives of the local communities interested in the problem. The coordinator of the program is a public health nurse whose headquarters are at the Sunland Training Center in Gainesville. Her duties are to arrange for speakers, programs, workshops and to act as consultant and liaison with the voluntary agencies and mental retardation associations in the state.

The main purpose of the program is to make professional persons aware of the facilities, what they offer and how they operate, what the limitations and strengths are and how the patients live, work and learn. With this knowledge, these people can return to the communities and inform their own people of the mental retardation institutions of the state from firsthand experience. Two community programs were held with an attendance of 115 persons; 10 orientation sessions at Sunland Training Centers throughout the state were attended by 267.

Efforts are made to facilitate early diagnosis and treatment of mental retardation through the encouragement of well child conferences and guidance clinics as an integral part of the MCH program. Stress is also placed on the role of adequate prenatal care as a measure in reducing the number of new retardates added to the population each year.

The bureau is also concerned with several aspects of early detection, diagnosis and treatment of mental retardation. Well child conferences and child guidance clinics held throughout the state are encouraged as

an integral part of the MCH program. Children are brought to the clinics for routine screening procedures, immunizations and physical examinations. This gives an opportunity for children to be seen early so that defects or abnormalities present can be noted and proper referral made.

Numerous activities are carried on in the field of PKU control. One of the most basic is the encouragement of PKU screening programs in CHDs. This is done through dissemination of information in the form of educational materials as well as through personal contact. The Bureau of Laboratories makes available testing materials as well as confirmatory serum tests for diagnosis which are available to all clinics and physicians of the state.

A statewide registry is kept in the bureau of all known cases of PKU. Efforts are directed toward the follow-up of the families of all cases in order to make them aware of the hereditary nature of the disease and the importance of having any future children tested and followed from birth. The bureau also makes available for any indigent cases of this disease the necessary special diet preparation.

DEVELOPMENTAL EVALUATION CLINIC

This special project in mental retardation is located in Miami and during 1963 completed a total of 114 comprehensive evaluations. Seventy-one were new patients admitted to service and 43 were re-evaluations of children seen in the previous year. By the end of the year the clinic had 318 active cases.

The clinic staff is composed of a part-time pediatrician who serves as director, a clinical psychologist, one psychiatric social worker, a public health nurse, a speech specialist, a graduate student in pediatrics, a secretary and a clerk-typist. During the past year the requests for service have increased as has the caseload. Since most of these children are in the preschool age group, the needs of the patients and their families change from year to year. In addition, the children coming to the clinic are a very heterogeneous group representing a wide variety of problems and etiological causes. Because the clinic sees such a variety of problems, the diagnostic and counseling services which are offered by the clinic have to be extensive. It is estimated that approximately 50 per cent of the children seen at the clinic have multiple handicaps. Recommendations of the clinic to the parents have to be coordinated with existing community agencies. At times it is frustrating to find that optimal treatment facilities do not exist to carry out recommendations of the cases evaluated.

One of the original objectives of the clinic, the determination of what services are necessary and available for the proper training and guidance of the mentally retarded child and his family, continues to be worked on by all staff members in a variety of ways.

The public health nurse has continued to make home visits on all new patients to the clinic for service. In addition to aiding some of the parents in a home training and supervision program, conferences were

held with the general nursing staff of the Dade County Department of Public Health which is carrying clinic patients as part of its caseload.

The Children's Bureau has continued to make funds available for a graduate student in pediatrics at this clinic. The clinic has been used as a training field for the pediatric residents at the University of Miami School of Medicine as in the past.

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Director

WADE N. STEPHENS, M.D., M.P.H.
Associate Director

EDWARD L. FLEMMING, Ed.D., M.P.H.
Assistant Director

The role of the bureau is to carry out the policies, plans and work of the State Board of Health (SBH) in the field of mental health. Specifically it is concerned with primary, secondary and tertiary prevention of mental illness and the promotion of good mental health through cooperation with communities, state, regional and national programs designed to maintain and strengthen the mental health of Florida people. It works to strengthen and coordinate varied services and programs so there will be a maximum of preventive mental health services. The staff consists of a medical director and consultants in psychiatry, public health administration, mental health and psychiatric nursing, psychiatric social work, psychology and the social sciences.

The Florida Interagency Committee on Mental Health (established August 1, 1961) worked continuously through 1963 coordinating the major state programs in mental health and retardation, planning for an effective planning program to develop an official blueprint for comprehensive, community-centered mental health facilities and services, studying problems related to mental illness and mental retardation and preparing recommendations for the Legislature and Cabinet relating to mental health programs in Florida. The SBH designated the Interagency Committee to serve as an advisory and evaluating committee for the Mental Health Planning Program. The Committee has met frequently with the representatives of the office of the Secretary of State and the Mental Health Committee of the Legislature. By virtue of its work the Interagency Committee has established a leadership role in mental health affairs of the state.

In response to the principles enunciated in the report of the Joint Commission on Mental Illness and Mental Health entitled "Action for Mental Health" the Florida Mental Health Association and other organizations requested the Governor to ask the 1961 Legislature to create a survey committee to study mental illness in Florida and to prepare recommendations for a progressive program. The survey committee employed the services of the American Psychiatric Association to carry out the study. The final report was made to the Governor and the Legislature in December 1963.

The most pressing need in mental health in Florida is for more and better community-centered facilities and services along with bold and imaginative preventive programs. Florida's mental health problems are intensified by the influx of special population groups including Latins, space age personnel, tourists, retirees, agricultural migrants and others. The SBH feels it has a responsibility to them and all other new citizens who come to the state, and facilities, services and programs must be

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provided to meet their problems and needs. It is now estimated that approximately 56,000 persons in the state are seriously incapacitated with mental and emotional illness and over 300,000 need the services of a psychiatrist or mental health facility; that one in 10 school children have serious emotional difficulties and need child guidance services. Also, the state mental institutions are discharging patients more rapidly and the need for more follow-up services is increasing. Based on studies over the United States, it is conservatively estimated that mental illness costs the state over \$123,000,000 each year, or approximately \$22 per person.

The lack of professional manpower to meet the mental health needs of the state is becoming more critical as Florida's population increases. There is very little hope that an adequate supply of trained professionals will be forthcoming within the foreseeable future. To meet this manpower challenge the SBH has continued an intensive program to find ways of spreading the professional skills of the psychiatrist, psychologist, psychiatric social worker and psychiatric nurse to as many persons as possible. Ways are being sought to use the traditional public health teams, consisting of health officer, public health nurse, sanitarian, clerk and health educator, to provide broad linkage between mental health professional persons and the citizens of Florida. Emphasis in planning is on community-oriented mental health programs supplemented with close consultative relations with psychiatric, psychological and guidance clinics, social agencies and professional organizations.

As in the past, members of the bureau staff have participated in local, state, regional and national programs involving: parent-child relationships, adjustment of the aged, alcoholism, diagnosis and treatment of childhood emotional disorders, research and training in mental health, human relations in industry, the development of adult outpatient psychiatric services for indigents, follow-up studies for patients on trial visits from the state hospital, preadmission and concurrent assistance for state hospital patients and their families, services and programs for the retarded and brain injured, exceptional child programs in the public schools, the origin of delinquent behavior and preventive or control institutes, institutionalization of psychotic children and both formal and in-service training for mental health specialists and lay groups. Since July the staff has devoted a major portion of work time in planning activities.

COMMUNITY MENTAL HEALTH PLANNING PROGRAM

A major two year Community Mental Health Planning Program was initiated by the SBH in April 1963. This program is supported by state funds and federal grants-in-aid provided by the Congress. The objective of the planning program is to develop for the state an approved plan of comprehensive community mental health facilities and services. Mental health legislation of the 88th Congress passed in 1963 provides matching funds and grants to assist states in the implementation of this approved plan and eligibility for obtaining federal mental health monies is contingent on establishing such a plan. All proposals for the use of these new funds must be compatible with the official state plan.

The community planning program operates under the State Health Officer with the Interagency Committee on Mental Health acting as an advisory and evaluating committee and the bureau provides staff. The machinery of the planning program is based on guidelines set up by the U.S. Public Health Service (USPHS). One of the major obligations assumed by the SBH in this planning task is to guarantee that the plan will be the product of the best thinking among all the agencies and organizations which have a significant interest in Florida's mental health. In view of this the SBH has authorized organization of a large Advisory Planning Council consisting of over 110 mental health agencies and organizations. The Advisory Planning Council was called together by the Governor and met September 30, 1963. At that time a Steering Committee was elected and charged with responsibility to prepare a plan for consideration by the council at an early date in 1964. The Steering Committee is working closely with the Mental Health Committee of the Legislature and the office of the Secretary of State in this task. The bureau provides staff for the Steering Committee.

Data collection and statistical studies are the responsibility of the bureau and the social scientist has been assigned to this work full-time.

The target date for completion of the plan is June 30, 1965.

OUTPATIENT CHILD GUIDANCE AND COMMUNITY MENTAL HEALTH CLINICS

For the 20 child guidance and community mental health clinics affiliated with SBH, 1963 was again distinguished more by change and modification than by growth and expansion. One new clinic was organized in Brevard County and a few clinics reported an increase in the number of professional personnel employed. The total number of persons served increased somewhat over past years.

The move toward adequate psychiatric consultation was significantly enhanced with most clinics showing gains in this respect. Only one clinic had a full-time psychiatrist at the end of 1960 compared to nine full-time psychiatrist-directors at the end of 1963. There are over 35 psychiatrists working in SBH programs.

The Council of Mental Health Clinic Directors, officially organized late in 1960, continued activities during the year. The council made valuable contributions in preparation of a model community mental health services act for Florida; making recommendations concerning Merit System salary ranges and job descriptions for all mental health professionals; and recognition of their responsibility to offer a broader service than the traditional diagnostic and treatment functions of the historic clinic.

With each clinic director faced with limited funds, excessive demands for services and staff shortages, considerations of "productivity ratios" loomed important. Each clinic continued to struggle with ways to improve the ratio of the number of persons seen and interviews conducted in relation to the total number of professional man hours available in his program.

COUNTY HEALTH DEPARTMENT PROGRAMS OF SPECIAL INTEREST

Brevard County

This county health department (CHD) has established an out-patient psychiatric clinic in Cocoa and is moving toward the development of a broad program of mental health services within the framework of public health.

Pinellas County

The emergency mental health service program in Pinellas County continued through this year and has become one of the most important public health-oriented mental health efforts in the state. A total of 1220 patients were visited in the program in 1963 with approximately 50 per cent being seen after regular working hours.

Marion County

A community psychiatric program was started in the Marion CHD in October with the employment of a full-time psychiatrist. The program leaders envision the development of a comprehensive program over the next few years.

THE FOLLOW-UP PROGRAM FOR FORMER STATE HOSPITAL PATIENTS

CHDs continued to give strong support to patients and families with problems of mental ill health. In 67 counties, public health nurses and mental health workers made numerous field and office visits to patients. In 1963, a total of 13,096 patients were admitted to mental health services, and over 5300 of these were patients on furlough or trial visit. A decrease in readmission rates has occurred even though the total number of patients sent out on trial visits increased from 4554 in 1956 to 5940 in 1963. In the fiscal year of 1962-1963 there was only an increase of 16 in the total hospital population. The important factors controlling readmissions are believed to be drug therapy continued by the patient after leaving the hospital plus the follow-up program of the SBH.

The special drug program for indigent follow-up patients was continued in 1963 in spite of a very limited budget. The drugs supplied to CHDs were: chlorpromazine, imipramine, methaminodiazepoxide, perphenazine, promazine, trifluoparazine and thioridazine.

MENTAL HEALTH WORKERS PROGRAM

Program activities in the mental health worker program remained about the same as in recent years. Presently, there are 26 workers assigned to CHDs. During 1963 they admitted a total of 4154 patients to services and made 8950 field visits and 15,709 office visits. There is increasing evidence that the professional performance of these health workers is reaching a high level of maturity and their contributions to CHD programs is becoming increasingly important.

EDUCATIONAL ACTIVITIES

The educational activities of the bureau are determined by the need to help public health personnel increase their competence in mental health public health practices and to support and assist community voluntary and official agencies and groups in every appropriate way to initiate and carry on mental health programs conducive to optimum mental health for Florida's citizens. The bureau provides financial assistance, leadership, co-sponsorship and staff participation as indicated and requested.

A workshop for mental health workers was conducted in August 1963. Staff members participated in the continuing in-service study programs for public health nursing personnel in CHDs and in a wide variety of workshops and conferences sponsored by other agencies and groups. These groups included personnel, guidance and rehabilitation counselors, policemen, CHD venereal disease investigators, nursing home operators, members of P-TAs, mental health and child guidance clinic personnel and mental health association members.

Educational Activities—Psychiatric Nursing

The bureau, in joint sponsorship with the Division of Public Health Nursing (PHN), offers workshops on Interpersonal Skills in Mental Health and Psychiatric Nursing for PHN supervisors and senior public health nurses on a continuing basis.

Interdisciplinary workshops on Human Relations and Leadership Skills are offered through joint sponsorship of the Division of PHN and the bureau, in cooperation with, and at the request of CHDs and local voluntary and official health and welfare agencies. Staff members from the bureau and clinics have served as resource persons and faculty.

During the past several years the demand for nursing service in mental health programs and in the care of mentally ill patients has skyrocketed. Many public health and general hospital staff nurses in Florida have been required to provide nursing care to patients although instruction and clinical practice in psychiatric nursing had not been included in their basic nursing school program. With the creation of the Mental Health Training and Research Council program this bureau assumed responsibility for responding to expressed needs of Florida nurses for staff development in this area.

STUDY OF COMPREHENSIVE MENTAL HEALTH PLANNING IN FLORIDA COMMUNITIES

This study is a part of the larger statewide comprehensive mental health planning program. It is designed to provide guidelines for the development and operation of community-centered mental health services, facilities and programs. The first phase of the study involves the collection of data regarding the prevalence and distribution of mental disorders in the population; and a description of the services, facilities and programs which are available for the prevention and treatment of mental disorders and the rehabilitation of persons suffering from these disorders.

Through this method the mental health needs of the communities will be identified.

The second phase of the study involves identifying and interviewing key persons in the communities regarding the development of needed mental health resources. Since there are many factors which influence the development and operation of mental health facilities, services and programs, the research team will attempt to secure informants who are able to provide information in each of the pertinent areas. Some informants will be selected because of their knowledge concerning the nature and extent of mental health problems in the county (examples: physicians, psychiatrists, directors of mental health clinics, health officers, county judges, law enforcement officers, educators, welfare workers and ministers). Others will be selected because of their knowledge regarding developing, financing and operating programs in the county (examples: county commissioners, legislators and agency directors). Some informants will be selected because of their knowledge concerning the culture and social organization of the county (examples: newspaper editors, business men, and members of "old families").

A pilot study is currently being conducted in an intermediate size county (population approximately 60,000). Following its completion, similar studies will be conducted in counties of various sizes in each geographic area of the state. It is believed that through this approach the information which is needed for comprehensive mental health planning for communities throughout the state can be obtained.

STATE LEGISLATION AFFECTING MENTAL HEALTH ACTIVITIES

The 1963 session of the Legislature took action on a number of proposals which affect the state's mental health programs.

The Legislature approved the establishment of an inpatient unit for psychotic children at the University of Florida College of Medicine, and \$500,000 was appropriated for this 25-bed pilot project which will serve as a research center and training facility for personnel in the field. Also authorized was \$3,000,000 for the development of Florida's fifth Sunland Training Center to be located in Dade County.

Legislation was enacted providing that directors of state institutions shall not serve as heads of multiple divisions. In effect, this separates the directorship of the Division of Sunland Training Centers and the Division of Child Training Schools. The two divisions have previously operated under a single director. The law also required the director of the Division of Mental Health, who was also serving as the director of the Florida State Hospital at Chattahoochee, to relinquish this dual role.

A Florida Medical Research Center on Mental Retardation was authorized to be established at the Sunland Training Center at Orlando, and \$150,000 was appropriated for this purpose.

The Legislature abolished the involuntary commitment law which had allowed police officers to temporarily place a person in a mental hospital to await a county judge's competency hearing. The 1963 law

provides that only the county judge can order a temporary confinement prior to an examination and the person so confined has right to a habeas corpus hearing.

The 1963 session also directed the Division of Mental Health and the Division of Corrections to develop plans for facilities at Lake Butler for the care of child molesters and criminal sexual psychopaths and asked the Legislative Council to study and report to the 1965 Legislature on the feasibility of setting up state nursing homes for the indigent aged.

TABLE 16
SUMMARY OF MENTAL HEALTH ACTIVITIES,
COUNTY HEALTH DEPARTMENTS, FLORIDA
1962 - 1963

Activities	Public Health Nurse		Mental Health Worker		Health Officer	
	1962	1963	1962	1963	1962	1963
Number of patients						
Admitted to service						
Child.....	1,355	1,361	1,103	1,295	783	898
On furlough.....	3,046	4,055	933	1,357	212	360
Other adults.....	1,720	2,047	1,026	1,502	177	221
Number field visits.....	20,738	27,328	6,435	8,950	95	1,825
Number office visits.....	5,531	9,680	14,647	15,709	4,224	6,839

TABLE 17
DISCHARGED PATIENTS BY CLINICS, TYPE OF SERVICE, CONDITION ON TERMINATION,
REFERRAL SOURCE, AND NUMBER OF NEW CASES,
FLORIDA CHILD GUIDANCE CLINICS, 1963

CLINIC	TYPE OF SERVICE				CONDITION ON TERMINATION				REFERRAL SOURCE				Number of New Cases
	Diagnosis and Treatment	Diagnostic Study Only	Psychological Testing Only	Other Services Only	Improved After Treatment	Unimproved After Treatment	Not Treated	Self	School	Court	Physician	Other	
FLORIDA TOTAL	7,068	1,609	1,694	1,680	1,510	565	4,983	307	274	342	109	6,026	6,044
Bay	217	94	20	69	62	32	123	13	10	2	7	185	196
Broward	756	334	167	49	236	98	422	39	13	6	10	688	683
Dade (Child Guidance Clinic)	227	34	124	12	26	8	193	16	6	2	3	200	211
Dade (Juvenile Court Branch)	225	6	6	217	5	5	220	1	1	60	8	164	216
Duval (Child Guidance Clinic)	630	98	138	113	69	29	532	90	54	41	8	497	541
Duval (Adult Mental Health Clinic)	353	147	93	19	107	40	206	15	26	2	1	335	310
Escambia	465	199	35	161	136	63	266	23	22	2	3	414	378
Hillborough (Child Guidance Clinic)	505	61	35	379	62	9	444	9	9	160	6	311	416
Leon	540	260	132	101	179	81	280	19	22	11	7	497	403
Manatee—Sarasota	257	29	40	40	148	19	228	6	2	11	7	232	227
Orange	569	175	166	62	166	19	334	20	25	19	7	488	475
Palm Beach (Child Guidance Clinic)	440	109	48	156	127	24	331	12	69	4	28	327	378
Palm Beach (Psychiatric Clinic)	153	64	43	14	32	46	89	12	6	3	2	136	149
Pinellas (St. Pete—Clearwater)	663	74	233	124	232	66	589	22	9	9	9	617	561
Pinellas (Adult Mental Health)	431	216	189	23	144	72	265	34	9	1	5	441	416
Polk	236	52	38	64	32	29	184	19	9	6	2	200	198
St. Lucie	265	92	87	77	6	15	173	10	18	2	6	229	238
Volusia	35	14	6	9	7	9	21	2	4	1	2	26	27
Brevard**	3	18	25	3	11	7	30	7	1	1	3	37	48
Hillborough (Adult Mental Health)**	48												

* Alachua County Health Department, Division of Mental Health, Performs all of the above services but is not ready presently to report.
**New Clinics, not reporting for a full year.

TABLE 18
DISCHARGED PATIENTS BY AGE, RACE, SEX, DIAGNOSIS, AND NUMBER TREATED,
FLORIDA CHILD GUIDANCE CLINICS, 1963

DIAGNOSIS	Total Patients	AGE IN YEARS										RACE AND SEX				Number Treated
		0-4	5-9	10-13	14-17	18-20	21-29	30-44	45-54	65 & Over	White		Nonwhite			
											Male	Fem.	Male	Fem.		
FLORIDA TOTAL.....	7,058	388	1,725	1,429	1,298	287	740	893	341	47	8,574	2,821	368	296	2,075	
Brain Syndrome (Acute, Chronic) Associated with convulsive disorder (Idiopathic Epilepsy).....	68	4	26	19	14		2	3			34	24	8	2	21	
Associated with Cerebral Arteriosclerosis or Senile Brain Disease.....	6								4	2	1	3		2	3	
All other Brain Syndromes.....	157	19	67	35	14		7	4	11		96	46	11	4	30	
Mental Deficiency (Familial or Hereditary)																
Mild.....	68	6	29	21	9	1	2				28	17	13	10	4	
Moderate.....	103	6	50	36	11						37	25	21	20	2	
Severe.....	0															
Severity not specified.....	3		1		1			1			1	2				
Mental Deficiency (Idiopathic)																
Mild.....	203	38	82	51	30		1	1			103	63	36	11	11	
Moderate.....	214	14	107	49	35	3		4	2		85	49	49	31	13	
Severe.....	76	11	87	15	7			1	1		25	19	16	16	4	
Severity not specified.....	10	6	4								6	4	1			
Psychotic Disorders																
Involuntary Psychotic Reaction.....	20							1	18	1	6	12		2	13	
Affective Reactions.....	40							7	16	5	17	21		2	31	
Schizophrenic Reactions.....	338							104	13		182	161	13	82	179	
Paranoid Reactions.....	4		14	33	64	28	87	2	1	1	3	1		1	2	
Other Psychotic Reactions.....	3							2	1		1					
Psychophysiologic Autonomic and Visceral Disorders (Psychosomatic Disorders & Organ Neuroses).....	45			2	13	7	4	6	9	4	18	26		1	21	

TABLE 18 (Continued)
DISCHARGED PATIENTS BY AGE, RACE, SEX, DIAGNOSIS, AND NUMBER TREATED,
FLORIDA CHILD GUIDANCE CLINICS, 1963

DIAGNOSIS	Total Patients	AGE IN YEARS								RACE AND SEX				Number Treated	
										White		Nonwhite			
		0-4	5-9	10-13	14-17	18-20	21-29	30-44	45-64	65 & Over	Male	Fem.	Male		Fem.
Psychoneurotic Disorders	247	2	36	41	28	18	49	54	17	2	96	143	4	4	170
Anxiety Reaction	11			1	1	2	6	1			4	7			9
Dissociative Reaction	39			2	9	7	4	11	6		6	28	2	3	26
Conversion Reaction	24		4	5	8		2	4	1		9	14	1		25
Phobic Reaction	26			6	5	1	4	8	2		11	14		1	18
Obsessive Compulsive Reaction	258		1	6	13	16	57	98	61	6	58	192	2	6	187
Depressive Reaction			7	4	4	2	4	9	6		16	19	1		29
Psychoneurotic Reaction, Other	36														
Personality Disorders	221		23	48	58	16	37	33	6		135	75	5	6	92
Personality Pattern Disturbance	991	8	186	236	229	36	126	142	28		555	383	28	25	460
Personality Trait Disturbance	133	3	11	11	42	13	26	32	6		101	27	1	4	49
Sociopathic Personality Disturbance	76	6	36	24	8	1			1		56	16			25
Special Symptom Reaction															
Transient Situational Personality Disorders	4			2	1			1							3
Gross Stress Reaction	124					7	42	57	17	1	20	96	1	7	91
Adult Situational Reaction	6	6									4	2		2	2
Adjustment Reaction of Infancy	780	41	477	255	6	1					524	227	22	7	341
Adjustment Reaction of Childhood	587	3	157	398	29						314	207	39	27	198
Adjustment Reaction of Adolescence	6				2	1		2	1		3	3			4
Adjustment Reaction of Late Life											1	6			1
Other	6														
No Psychiatric Disorder Found	228	108	61	24	20	1	3	3	5	3	109	100	8	11	5
No Diagnosis Made	1,897	113	469	335	283	97	174	291	111	24	960	795	82	60	15

FLORIDA COUNCIL ON TRAINING AND RESEARCH IN MENTAL HEALTH

Members of this Council are appointed by the Governor and in 1963 included: John T. Benbow, M.D., Macclenny; Mrs. Barbara Buchanan, Gainesville; Loyal Frisbie, Bartow; Mrs. E. W. Gautier, New Smyrna Beach; Victor B. Johnson, Ed.D., Tallahassee; Major General J. K. Lacey, Panama City; Kent S. Miller, Ph.D., Tallahassee; Coyle E. Moore, Ph.D., Tallahassee; Edwin W. Peck, Gainesville; Philip B. Phillips, M.D., Pensacola; Mrs. E. Clyde Vining, Miami. Mr. Frisbie and Dr. Miller were elected chairman and vice chairman respectively for the fiscal year beginning in July. Four meetings were held during the year, in Tallahassee, Miami and two in Jacksonville.

Training stipends were awarded as follows: psychiatric social work, 16; psychiatric nursing, 2; and clinical psychology, 6. The names of stipend recipients in 1963 are given under Coordination of Training elsewhere in this Report. Programs and activities were sponsored, directed toward expansion and improvement of nursing care to Florida's mentally ill, as follows: support of staff development providing supplementary instruction in mental health and psychiatric nursing for employed nurses; institute emphasizing changing roles and responsibilities in the care and rehabilitation of the mentally ill patient was held in Jacksonville with 82 persons in attendance; seminar providing psychiatric inpatient experience was held at Anclote Manor, Tarpon Springs, with 12 nurses enrolled.

A total of \$13,000 was granted for research, as follows:

Congenital Heart Disease—Its Meaning for the Affected Child, D. R. Offord, M.D., The J. Hillis Miller Health Center, University of Florida	\$ 550
Effects of Incarceration on the Family, George C. Killinger, Ph.D., LL.D., Florida State University	5000
A Comparison Study of Medical Inpatients, John J. Schwab, M.D. The J. Hillis Miller Health Center, University of Florida	1300
The Effects of Segregating Boys and Girls into Separate Classes in the First Grade, Dorothy S. Minchew, Principal, Southside Estates Elementary School, Jacksonville	3650
The Performance of Negro Children on an Oddity Discrimination Task—a function of the race of the examiner and the type of verbal incentive used by these examiners, Wallace A. Kennedy, Ph.D. Florida State University	2500

BUREAU OF NARCOTICS

FRANK S. CASTOR, Ph.G.,
Director

The bureau is held responsible by Florida statutes for the enforcement of the laws concerning narcotics, barbiturates and amphetamines (legal and illegal), drugs and cosmetics, pharmacies, medical and other practitioners of the healing arts and registration of such practitioners, drugstores and others legally dispensing or administering narcotic or restricted drugs.

Operating from offices in Jacksonville, Miami, Tallahassee, Tampa and Orlando, the bureau's 12 inspectors with police powers make inspections and arrests. They cooperate with such agencies as local police, sheriffs, Florida Highway Patrol, the Florida Beverage Department and the federal narcotics and food and drug agencies. The bureau also cooperates closely with state disciplinary boards governing the practice of pharmacy, medicine, nursing and other healing arts.

It is felt that education is one of the prime responsibilities of the personnel. The belief is held that no better use can be made of time and facilities than in seizing any opportunity to help instill in Florida youth a sound respect for the dangers inherent in the improper or medically unsupervised use of narcotics, barbiturates and amphetamines. In this connection, the inspectors made 76 appearances before schools, colleges, civic clubs, PTAs, legal, medical, other professional and police groups. They emphasized the need for personal obedience of the law, recognition of illegal merchandise and activities and for cooperation with enforcement personnel. They stress this latter point, making it clear that only a trained enforcement officer is qualified to determine whether and when action is justified.

Total arrests numbered 393, 61 more than in 1962; narcotics were involved in 242 of these cases. There were 27 persons confined by court action for treatment of narcotic addiction. These persons were not charged with crimes. There were also 108 arrests for violations involving barbiturates and amphetamines, an increase of 33 over the previous year. Violators of this type are usually found at truck stops, night clubs, drugstores, etc. Trucking companies have been found to be thoroughly cooperative in assisting with enforcement among their drivers. Arrests for practice without license included eight in pharmacy, four in medicine and three in chiropractic. Only one was recorded in connection with the drug and cosmetic act though hundreds of minor matters were corrected without court action. This law was enacted to protect the public against impure or improperly labeled drugs or cosmetics manufactured within the state and not subject to federal laws. Infractions are frequently technical and inadvertent without criminal intent and the inspectors do not act with undue severity. However, a number of violations did occur which involved the removal of products from the market. Over a million dollars worth of drugs involved in fires were voluntarily removed from sale to protect the

public from possibly deteriorated products. Voluntarily recalled merchandise such as drugs which had passed their stipulated shelf-life were checked by bureau personnel to assure proper compliance with manufacturers' instructions.

Open inspections totaled 2029 in 1963. Such inspections are defined as unscheduled visits to drug and sundry stores, hospitals and clinics, drug manufacturers and wholesalers and other properties subject to bureau jurisdiction. On the other hand, investigations — those inspections made as the result of complaints or suspicion—numbered 2046 resulting in the 393 arrests previously mentioned and 116 corrections without legal action. Lack of sufficient evidence, cessation of illegal activity or false rumor accounted for the lack of action in the remainder of the cases. The courts handled those arrested as follows: 120 received sentences averaging approximately three years, 108 were placed on probation, 41 were discharged, 21 were acquitted and seven were placed on the absentee docket. The courts assessed fines totaling \$6676.

The continued presence of a large number of Cuban refugees in the Miami area has added to the enforcement problem there. No disproportionate amount of illegal activity is attributed to these people, but they account for their share of cocaine seizures and resultant arrests and medical and pharmacy practice without license. Corrective measures are being taken.

A poignant facet of the narcotic story is found in the fact that healing practitioners and nurses sometimes become enmeshed in the toils of addiction. Overwork or painful or mental diseases have been found to be the most common reasons for such seemingly unexplainable action. In such cases the individuals involved are referred to their respective disciplinary boards for appropriate action, and in the case of licensed healers, the privilege of prescribing or administering narcotics is almost always rescinded.

Immediate and long-range plans of the bureau remain unchanged from year to year. Stern justice must be visited upon the violator who knowingly trafficks in narcotics. Addicts must be discovered and assisted to seek rehabilitation. The technical laws embracing registration of practitioners must be administered and those involving the protection of the public from abuses inherent in impure or improperly labeled drugs and cosmetics must be enforced. But above all the effort to inform and motivate the public toward an understanding in depth of the many intricate facets of the problem of illegal self-medication with restricted drugs must be carried forward.

SUMMARY OF ACTIVITIES, FLORIDA, 1963

Investigations	2046
Open inspections	2029
Arrests	393
Violations corrected where no legal action was taken	116
Aggregate sentences imposed by courts	375 yrs., 10 mos., 3 days
Aggregate fines imposed by courts	\$6676

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Defendants receiving probation, deferred, withheld or suspended sentences	108
Cases discharged or nolle prosequi by courts	10
Narcotic addicts confined to state or federal institutions for treatment	27
Persons acquitted by the courts	21
Cases placed on absentee docket	7
Bonds estreated	\$250
Talks made	76
Drug stores registered for 1963-64	1629

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TABLE 19
MEDICAL PRACTITIONERS REGISTERED WITH THE BUREAU
OF NARCOTICS BY PLACE OF RESIDENCE,
DECEMBER 31, 1963
(Excludes Deceased Practitioners)

County	Total	Medical Doctors	Osteo-paths	Chiro-practors	Naturo-paths	Chiro-po-dists	Physio-therapists
Total in state....	7,262	5,672	464	566	147	156	257
Alachua.....	215	193	1	5		2	14
Baker.....	3	3				1	1
Bay.....	50	40	3	5			
Bradford.....	9	7	1	1			
Brevard.....	145	121	2	16	12	3	3
Broward.....	596	419	76	47		16	26
Calhoun.....	4	3		1			
Charlotte.....	16	13		3			1
Citrus.....	8	6		1			
Clay.....	14	13	1				
Collier.....	19	16	1	2			1
Columbia.....	15	13		1			54
Dade.....	2,013	1,631	115	120	48	45	
DeSoto.....	9	7	1	1			
Dixie.....	547	477	12	30	8		12
Duval.....	160	141		10		2	7
Escambia.....	2	2					
Flagler.....	7	4	3				
Franklin.....	22	20	2				
Gadsden.....	1	1					
Gilchrist.....							
Glades.....	5	5					
Gulf.....	4	4					
Hamilton.....	11	9		1		1	
Hardee.....	8	6		2			
Hendry.....	10	9		1			
Hernando.....	26	22	2	2			
Highlands.....	483	366	22	39	27	12	17
Hillsborough.....	3	3					
Holmes.....	34	25	3	4		1	1
Indian River.....	17	15	1	1			
Jackson.....	4	4					
Jefferson.....	1	1					
Lafayette.....	64	44	4	10	1	1	4
Lake.....	73	55	4	8	2	2	2
Lee.....	108	91	3	4	2	2	6
Leon.....	3	3					
Levy.....	1	1					
Liberty.....	6	6					
Madison.....	89	57	9	15	3	1	4
Manatee.....	54	42	5	5		1	1
Marion.....	14	12		2			
Martin.....	39	30	4	1			4
Monroe.....	9	9					
Nassau.....	33	28		5			
Okaloosa.....	6	5		1			
Okeechobee.....	460	342	36	41	9	10	22
Orange.....	13	11	3	3			1
Osceola.....	372	292	16	38	4	10	12
Palm Beach.....	27	15	8	4			
Pasco.....	666	461	84	58	21	21	31
Pinellas.....	223	183	4	22	2	4	8
Polk.....	24	19		3			
Putnam.....	26	21		3			
St. Johns.....	37	29	3	4			
St. Lucie.....	16	15		1			
Santa Rosa.....	162	119	3	17	3	5	15
Sarasota.....	45	36	1	5	1	1	1
Seminole.....	2	1					
Sumter.....	7	6					
Suwannee.....	8	5		1			
Taylor.....	1	1		2			
Union.....	195	182	30	19	1	4	9
Volusia.....	1	1					
Wakulla.....	8	8					
Walton.....	4	3					
Washington.....	3,370	2,880	185	183		63	59
Out of state.....							
GRAND TOTAL	10,632	8,552	649	749	147	219	316

BUREAU OF PREVENTABLE DISEASES

C. M. SHARP, M.D.
Director

DIVISION OF EPIDEMIOLOGY

The Division of Epidemiology has been handicapped by the lack of a full-time director. Most of the epidemiological investigations have been directed or conducted by the director of the bureau with assistance from the county health officers, Division of Sanitation, Bureau of Sanitary Engineering and the Division of Public Health Nursing.

Poliomyelitis

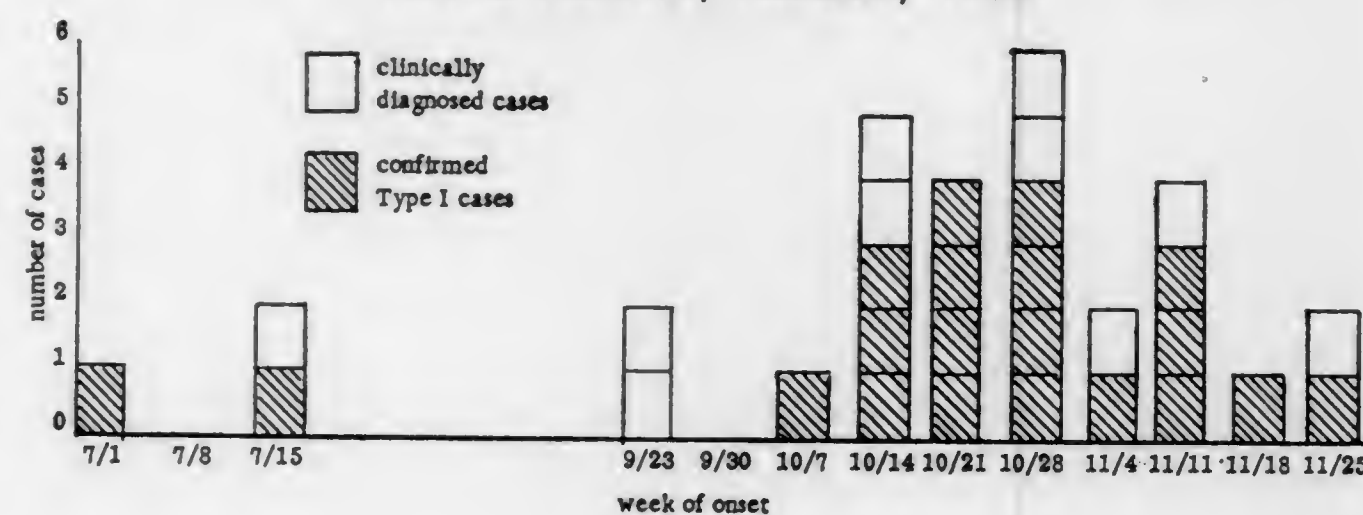
Poliomyelitis was the communicable disease requiring the most activity in the epidemiology division. Through November 30, 1963, 30 cases had been reported from Duval County. Twenty-seven of these occurred during the 10-week period September 23, through November 30. Type I poliovirus was recovered from 20 of the 30, including three fatal cases. Twenty-six of the 30 were paralytic.

The cases were predominantly Negro (25 of 30) and less than three years of age (16 of 30). Of the three fatalities one was a 28 year old non-white female and the other two were Negro children under three years of age.

Twelve of the cases had had previous injections of the Salk vaccine, nine had had two or more. One paralytic case had received six Salk injections. One non-paralytic case had received no Salk vaccine and another had taken three doses. Epidemiologic histories from 20 of the cases revealed no evidence to suggest a common source. Geographically, and by date of clinical onset, cases were widely distributed, though the northwestern section of Duval County was most affected. Two weeks after the feed-

FIGURE 1

REPORTED POLIOMYELITIS CASES, BY WEEK OF ONSET
DUVAL COUNTY, FLORIDA, 1963



ing of Type I virus in Jacksonville, only seven additional cases were reported before the disease was brought under control. Plans were made to give Type III and Type II vaccine in 1964.

Only six cases have been reported this year from the remainder of the state. Poliovirus Type I was isolated from two of these (Hillsborough and Dade Counties) and Type III from another (Polk County), while the type is presently unknown for the other three cases.

Hepatitis

Florida experienced a fairly stable level of serum and infectious hepatitis cases from 1952 to 1959, with an average of 255 cases per year during this period. However, for the years 1960 and 1961 there was a substantial rise in the average to 1153 cases per year. Data for 1962 and 1963 indicate that presently there is a downtrend in the number of cases being reported, with 909 cases recorded in 1962 as compared with 629 cases in 1963.

Salmonellosis

Florida has been participating in the U.S. Public Health Service (USPHS) salmonellosis survey. There were 109 cases reported in 1962, as compared to 68 cases in 1963.

Childhood Diseases

A large number of cases of chickenpox, impetigo, German measles, influenza, measles, mumps, scarlet fever and whooping cough were reported. Reporting of these diseases is not accurate enough to place any emphasis on them, but some are preventable. For instance, 25 diphtheria cases were reported in 1963, a reduction from 1962 (44). The majority were in nonwhite unimmunized patients.

Encephalitis

There were 127 cases of encephalitis reported from most areas of the state in 1963, as against 265 cases in 1962. These cases were due almost entirely to acute viral diseases such as mumps, influenza and ECHO virus.

The major outbreak of the arbovirus occurred in the Tampa Bay area in 1962. Mass mosquito spraying, as well as climatic conditions with fewer mosquito breeding areas, is believed to account for the absence of this disease in 1963. Only one case of arbovirus infection was confirmed.

Food Poisoning

There has been a marked decrease in food poisoning outbreaks reported, mostly staphylococci in origin, in 1962. A total of 1598 cases were reported then which decreased significantly in 1963 to 295 cases.

Meningococcal Meningitis

There has been a sharp rise in reported cases of meningococcal meningitis. Ninety-five cases were reported in 1963 as against 46 cases in 1962.

Influenza

As contrasted to the nation as a whole, which has had rather severe outbreaks of influenza, Florida showed a marked decrease from 12,358 reported cases in 1962 to 8065 in 1963.

Tetanus

There was an increase in this disease to 37 cases when compared to 29 cases last year. As usual, the largest number of cases were reported in Dade County, but scattered cases were found all over the state. This makes certain needs in the immunization program obvious; the tetanus toxoid should be given to expectant mothers, since many infections in low income groups arise from the umbilicus in infants delivered by midwives. Another need is to develop a method of education in the nonwhite unskilled male labor group, since this is one of the principal groups in which the infection occurs.

Routine Morbidity Surveillance Programs

Continued cooperation with the USPHS has been maintained on the surveillance of typhoid, leptospirosis, arbovirus encephalitis, infectious hepatitis, malaria and food-borne diseases, and poliomyelitis.

NEW PROGRAMS

The bureau is now beginning a new immunization program. The present program was started after the State Board of Health (SBH) received a USPHS grant of \$217,302 under the terms of the Vaccination Assistance Act which was passed in Congress in October 1962, with funds being made available in May 1963. The State Budget Commission authorized the expenditure of the Florida grant in September 1963. These monies are being allocated to the counties which participate in the program on the basis of the number of resident births in a county. Under the terms of the Act, all grants must be made prior to July 1965.

The Act is directed towards increasing protection of the newborn against polio, diphtheria, whooping cough and tetanus. Florida also is including smallpox vaccination in its program. This state's procedures were developed as a result of method studies in three pilot county health departments (CHD): Hillsborough, Orange and Palm Beach. A brief description of the program procedures is as follows: Before the routine program is initiated in a particular county, a survey of 15-month-old children is conducted to establish the immunization status of this group. The survey procedure is similar to the routine program procedure (contact is made by card, phone or home visit). The established bases line of immunization levels can then be used to help evaluate the effectiveness of the program in a particular county: (1) From the birth certificate which is recorded in the Bureau of Vital Statistics, the Division of Data Processing addresses two mailing cards and a file card on each birth. (2) The first of each month the addressed mailing cards on children that are three months old are shipped to the CHD in the county where the children reside. (3) The CHD sends out a mailing card which urges the

mother to take her child to her private physician for its immunizations, asking that the postage prepaid mailing card be returned to the CHD when this is done. (4) To the parents from which no response is obtained a reminder follow-up letter is sent a month later. (5) After waiting two more weeks, those parents who have not responded are contacted by telephone, if possible. (6) If no telephone contact is possible, a home visit is made by a public health nurse.

Through one of the above methods the parents are advised as to the importance of these selected immunizations and are urged to have their baby and other members of the family protected.

When the child reaches 15 months of age (or one year after the first contact) another mailing card is sent to the parents to determine whether or not the initial series has been completed. If it has not, they are urged to do so. If it has been completed, advice is given regarding the need for appropriate boosters. The same steps in contact are followed at 15 months of age (mailing card, letter, telephone or home visit) as was followed when the child was three months of age.

The program has been incorporated into the activities of 23 CHDs.

SPECIAL STUDIES

The study of infections due to Unclassified Mycobacteria (UM) in Florida is supported by a National Institutes of Health Grant. The central "atypical" register now contains records on some 2700 individuals from whom UM have been isolated, and over 500 new individuals are being added yearly.

An objective of high priority in 1963 has been the collection of full clinical, bacteriological, radiological and epidemiological information on all these individuals and careful follow-up of every individual with multiple isolations.

With the information obtained and analyzed during the year, it can now be presumed that over 800 of these 2700 individuals are significant cases with serious pathology due to UM.

A large majority have a previous history of pulmonary disease, *M. tuberculosis* infections, chronic bronchitis, emphysema or asthma. A total of 167 cases (7.8 per cent) have had an active progressive pulmonary process associated with multiple isolations of UM and without any isolation of *M. tuberculosis*. Thirty-one individuals (1.4 per cent) expired with, and probably because of, their UM infection.

These organisms are largely resistant to the anti-tuberculosis drugs and surgical resection is often indicated in cases of serious pulmonary infestation. Although it is obvious that the UM are capable of causing progressive pulmonary disease, the majority of these 2700 individuals do not at present exhibit any recognizable pathology. The significance of their UM isolations is a subject for further study and follow-up.

By race and sex the larger proportion of cases are white males; by rates, the Negro population is apparently the most commonly involved.

VENEREAL DISEASE CONTROL

HARVEY M. BURNETTE
Administrator

This staff includes 43 program representatives in the field who provide the necessary interviewing-investigation and other services to the county health departments (CHD).

One of the prime functions of this Program is to provide assistance to the CHDs in their local programs for casefinding, treatment and prevention of venereal diseases, particularly syphilis.

A total of 1883 cases of primary and secondary syphilis were reported to the State Board of Health (SBH) during 1963. This is the largest number reported since 1950 and represents the fifth consecutive year of increases in reported infectious syphilis.

Cases of reported early latent syphilis declined 34 per cent, to 999 cases in 1963. This decline is a most heartening factor since it indicates a measure of success in the endeavor to bring under treatment larger numbers of cases in the early infectious stage at a time when treatment is simpler and more effective, and when the potential for transmission can be terminated.

During 1963, the program objectives were primarily influenced by the Task Force Report to the Surgeon General, U.S. Public Health Service (USPHS), on Syphilis Control in the United States which stated: "... A direct coordinated attack on infectious syphilis will eliminate syphilis as a public health hazard in the United States." This Task Force, composed of state and local representatives throughout the country who were concerned about the rising incidence of syphilis, recommended: (1) That an intensive effort be inaugurated to enlist the private physician and his professional societies and associations in the control effort, providing at least two visits per year by a qualified health worker to all general practitioners, and one visit a year to the remaining physicians. (2) That a program be established to insure that all laboratories processing blood tests for syphilis cooperate in the control effort by reporting to appropriate CHDs all positive specimens by name of patient. (3) That current interview-investigation services be intensified and extended to cover all infectious syphilis cases and that all such cases be interviewed and reinterviewed for sex contacts, acquaintances and associates, regardless of reporting source. (4) That a comprehensive and dynamic education program be developed for professional workers as well as for the public.

In pursuit of the first recommendation, it has been demonstrated that one of the most effective means of intensifying the epidemiologic casefinding efforts has been through extending venereal disease contact interviewing and investigation services to the private physician and his patients. In areas where these and other related CHD services have been offered to physicians in a professional manner, in an atmosphere of assured confidentiality and on a continuous basis, as much as 65 per cent of the infectious syphilis has been diagnosed and reported by private physicians. During 1963, 5354 Florida physicians received personal visits from VD

representatives in an effort to establish the working concept of bilateral CHD-private physician responsibility in syphilis control.

Following recommendation No. 2, each private, public and federal laboratory in the state was visited by a VD representative serving one of the six VD control districts. An appeal was made to each laboratory director to report all reactors to the CHD so that follow-up could be made through the physicians submitting these specimens in order to insure early and adequate treatment, and effective interviews for contacts. During 1963, 19,548 reactive specimens for syphilis were followed through this technique, resulting in 593 cases of primary and secondary syphilis and 3785 total cases of syphilis treated.

Intensification of interview-investigation techniques during 1963 was in keeping with Task Force recommendation No. 3. All available cases of reported primary and secondary syphilis were interviewed and reinterviewed for sex contacts as was a majority of the early latent syphilis cases. In addition, "cluster" techniques were more stringently applied in an effort to include in these investigations suspects and associates of positive cases.

Recommendation No. 4, related to need for a dynamic program of VD education, deserves priority. The large number of infectious cases reported during 1963 involved many teen-agers. The VD staff health educator, in cooperation with CHDs, has presented long range educational programs to 116 teachers representing 34 junior and senior high schools in 18 counties, an increase of six counties over the previous year. Short-term venereal disease aids workshops have been presented for VD interviewer-investigators at the district level. These workshops have been presented to acquaint them with films, slides, pamphlets and other educational materials. VD education is also promoted by providing appropriate information to physicians, laboratories and CHDs.

In addition, a number of lectures were presented by local VD program representatives to schools, PTAs and civic groups. Several newspaper articles were printed during the year, and a number of radio and television editorials were broadcast.

The total number of syphilis in all stages reported in 1963 totaled 6945 cases, a 16 per cent increase over the 1962 figure.

Reported gonorrhea totaled 8869 cases and marked the fourth consecutive year of decline of this disease. These figures may not represent a true decrease since more casefinding effort has been devoted to syphilis epidemiology in recent years.

Chancroid, lymphogranuloma venereum and granuloma inguinale did not make significant contributions to venereal disease morbidity during the year.

The large increases in infectious syphilis during the last several years may be attributed to: improved case reporting, improved and more strenuously applied casefinding techniques and increases in the true incidence of the disease.

In 1963, this program participated in a nationwide study of infectious syphilis epidemiology conducted by the Venereal Disease Branch of the

USPHS. The result of this study has resulted in some changes in case-finding techniques. Cooperation was also given the USPHS in a study which pertained to motivational factors which influenced or failed to influence infected persons to seek treatment. This study of Florida patients revealed that: they do get VD information but not from a responsible source; they get it at an early age and from their peers; and, their information does not influence them to voluntarily seek relief of their symptoms.

TABLE 20
SYPHILIS CASES AND RATES PER 100,000 POPULATION,
FLORIDA, 1940-1963

Year	Total	Primary and Secondary	Early Latent	Late & Late Latent	Congenital	Not Stated
Number of Cases						
1963.....	6,945	1,883	999	3,742	321	.....
1960.....	4,115	639	1,047	2,254	175	.....
1955.....	5,541	394	1,329	3,616	202	.....
1950.....	10,714	1,495	3,982	4,795	442	.....
1945.....	16,034	2,054	7,039	5,210	487	1,244
1940.....	19,966	1,964	1,998	4,707	413	10,884
Rates per 100,000 Population						
1963.....	123.1	33.4	17.7	66.3	5.7	.....
1960.....	82.1	12.7	20.9	45.0	3.5	.....
1955.....	151.3	10.8	36.3	98.7	5.5	.....
1950.....	383.0	53.4	142.4	171.4	15.8	.....
1945.....	705.1	90.3	309.6	229.1	21.4	54.7
1940.....	1042.6	102.6	104.3	245.8	21.6	568.3

DIVISION OF RADIOLOGICAL AND OCCUPATIONAL HEALTH

EDWIN G. WILLIAMS, M.D.
Director

This division has the responsibility for overall direction and coordination of all activities related to the interlocking fields of radiological and occupational health carried out by the State Board of Health (SBH). This includes specific responsibility in the area of occupational disease hazards in cooperation with the Florida Industrial Commission (FIC). During the year, work continued with the Florida Nuclear and Space Commission, the Atomic Energy Commission (AEC), the SBH and others to advance the negotiations preparatory to the transfer of certain regulatory responsibility from the AEC to the state.

The 1963 Legislature did not provide funds for a program that could begin to cope with the rapid industrialization of the state or the worldwide recognition of the public health obligations in the field of radiological health. However, during this year, largely with outside support, the staff of this division increased from 12 to 19. This includes the assignment of

a radiological engineer and an industrial hygienist by the U.S. Public Health Service (USPHS). In addition, the services of three USPHS trainees (COSTEPS) and three state summer students were utilized.

In the field of training (in addition to the normal division in-service training and SBH orientation courses) division personnel have been encouraged to avail themselves of training and educational opportunities.

RADIOLOGICAL HEALTH

Regulations

As a continuation of the effort to provide a basis for the transfer by the AEC of regulatory authority over certain radioactive materials to the state, the radiological health regulations, Section 170J of the Florida Administrative Code, were reviewed by the division in conference with the AEC and modifications were prepared for consideration by the Board.

X-Ray Survey and Consultation

The program of survey of X-ray machines and consultation with the user was continued. This service has been rendered to 66 counties since the program began. However new machines are coming into the state nearly as fast as surveys are being made.

Surveys were made of 655 machines in 437 dental installations and of 300 machines in 215 other installations. The analysis of the data has been completed on 404 diagnostic installations and a summary is presented in Table 21. County Health Departments (CHD) are encouraged to conduct local radiological health programs and assistance is provided to the county in the form of instruction, the loan of equipment and the short-term assignment of state personnel. The data reported in Table 21 includes that from three such CHD programs.

During 1963 a high priority was given to survey of SBH and 27 CHD X-ray machines and facilities. Assistance was provided in modifying these facilities where necessary and consultation was given in planning of X-ray rooms in new facilities. The division continued to operate the personnel monitoring service for the state and CHD personnel occupationally exposed to radiation. A total of 1770 film badges (approximately 150 per month) were handled. Investigations were made of 15 apparent overexposures.

It is the objective of the division to extend the X-ray survey and consultation program to all X-ray sources in the state on a continuing basis. Previously surveys have been performed primarily in medical and dental installations, but emphasis is now being placed on covering all categories, including industrial users.

Radioactive Materials Control

The division continued to cooperate with the AEC Division of Compliance, by participating in 44 inspections of users of radioactive materials. There were, at the end of the year, 293 AEC licenses in the state held by 208 licensees. In addition, 214 out-of-state licenses were authorized to use radiation sources in this state. Visits were also made to

some of the 59 recorded radium users and equipment was loaned to CHDs for surveying radium facilities.

Local health, police and fire officials continued to be provided with notification of radioactive material users.

Environmental Radiation Surveillance

The environmental monitoring task force continued to be active in planning program needs and priorities. A format was drawn up for the annual reporting of all environmental radioactivity data collected in Florida.

The division continued to operate the Jacksonville station of the USPHS Radiation Surveillance Network (RSN) with precipitation and high volume air samples being collected and forwarded to the USPHS for laboratory analysis.

The division continued the program, begun in 1962, of supplementing RSN stations in the state (Jacksonville and Miami) by making air and precipitation sampling equipment available to four county stations. An addition during 1963 was the provision of three air samplers to Brevard County for sampling in the Cape Kennedy area. The air and precipitation samples are analyzed by the Bureau of Laboratories' Radiological Laboratory in Orlando; data is reviewed and analyzed and reports are prepared and distributed by this division.

In order to supplement the USPHS milk monitoring network which has one station in Florida, a state milk monitoring program has been established. The monitoring of Iodine-131 (I-131) in milk moved into full swing with the cooperation of CHDs, Regional Laboratories and the Radiological Laboratory. The number of sampling points was expanded from the two that were established in 1962 to the present five.

Figure 2 summarizes average data from the USPHS and the SBH monitoring programs in Florida. While levels of radioactivity in the environment due to nuclear testing had dropped to very low levels during the test moratorium, activity reappeared with the resumption of testing in September 1961.

I-131 levels reflect new introductions of fresh fission products into the environment. The concentration of I-131 in milk dropped off shortly after the beginning of the year so that levels are no longer detectable. Statewide environmental radiation surveillance will continue with greater emphasis on long-lived activity such as Sr-90 and Cs-137.

The division worked with the USPHS, the Air Force, the AEC, National Aeronautics and Space Administration (NASA), the Florida Nuclear and Space Commission and other state agencies, governmental contractors, the Bureau of Sanitary Engineering and the Brevard CHD in developing a radiation surveillance program for the Cape Kennedy vicinity. The establishment of air sampling stations in Brevard County was the first step in this long-range program.

Emergency Planning

The division worked with the Florida Nuclear and Space Commission, the Florida Highway Patrol (FHP) and various statewide colleges

and universities, to develop a Florida radiological assistance plan for handling radiation emergencies and accidents within the state. Under this plan, the FHP is a central alerting and communications agency. Radiological emergency teams have been organized in the Pensacola, Tallahassee, Gainesville, Jacksonville, Tampa Bay and south Florida areas and work is underway to train, rehearse, and completely equip and evaluate these teams. Handling radiological emergencies will be an increasing part of the division's program in the future as the state accepts certain radiation control activities from the AEC.

The SBH met with the Florida Department of Agriculture and the representatives of the various interests in the dairy industry to outline plans for dealing with radioactive contamination in milk at levels of public health significance should these ever occur.

Research

The X-ray Exposure Study, a two year project involving a study of X-ray usage among a sampling of various practitioners in the healing arts and involving an evaluation of survey and consultation methods, was brought to a conclusion in August. The participating offices, summarized in Table 22, numbered 109 and represented 167 X-ray machines. These offices and machines had a typical total monthly workload of 13,542 X-ray examinations and detailed records were kept on 8881 examinations.

The survey techniques in the study were essentially the same as used in the regular statewide X-ray survey program. It was learned that certain modifications in these techniques might be expected to be more effective in reducing unnecessary exposure. For example, inclusion of a second visit to further discuss the recommendations made resulted in a 160 per cent increase in compliance with these recommendations in certain types of installations. It was reconfirmed that the most easily obtainable reduction in population exposure is that which can be brought about through equipment modification. Examples of benefit of such a survey program are shown in Table 23 for patients receiving some of the more common diagnostic examinations. The percentage of patients likely to be exposed to the more important machine deficiencies before and after the survey are compared in the Table. Particularly striking benefits are derived from the dental surveys in which beam size and filtration modifications are made by the surveyor on the spot and from recommendations to reduce beam size in chest radiography.

With the support of a grant from the USPHS, Division of Radiological Health, a study of background radiation in Florida was initiated. A total of 723 measurements of external gamma radiation were made, and 185 air samples were collected at two sampling stations and analyzed for morning radon activity, afternoon radon activity, thoron activity and long-lived alpha activity. During the coming year food samples will be analyzed, water data collected to date will be reviewed, and as a result of the information gathered to date, the external gamma radiation measurements and air sampling will be modified and continued. It is intended that this be the initial phase of a long-range study which should provide additional information about the effects of low levels of radiation exposure to the population.

FIGURE 2
ENVIRONMENTAL RADIATION SURVEILLANCE

Radioactivity in Air, Precipitation & Milk
1961-1963 Florida.

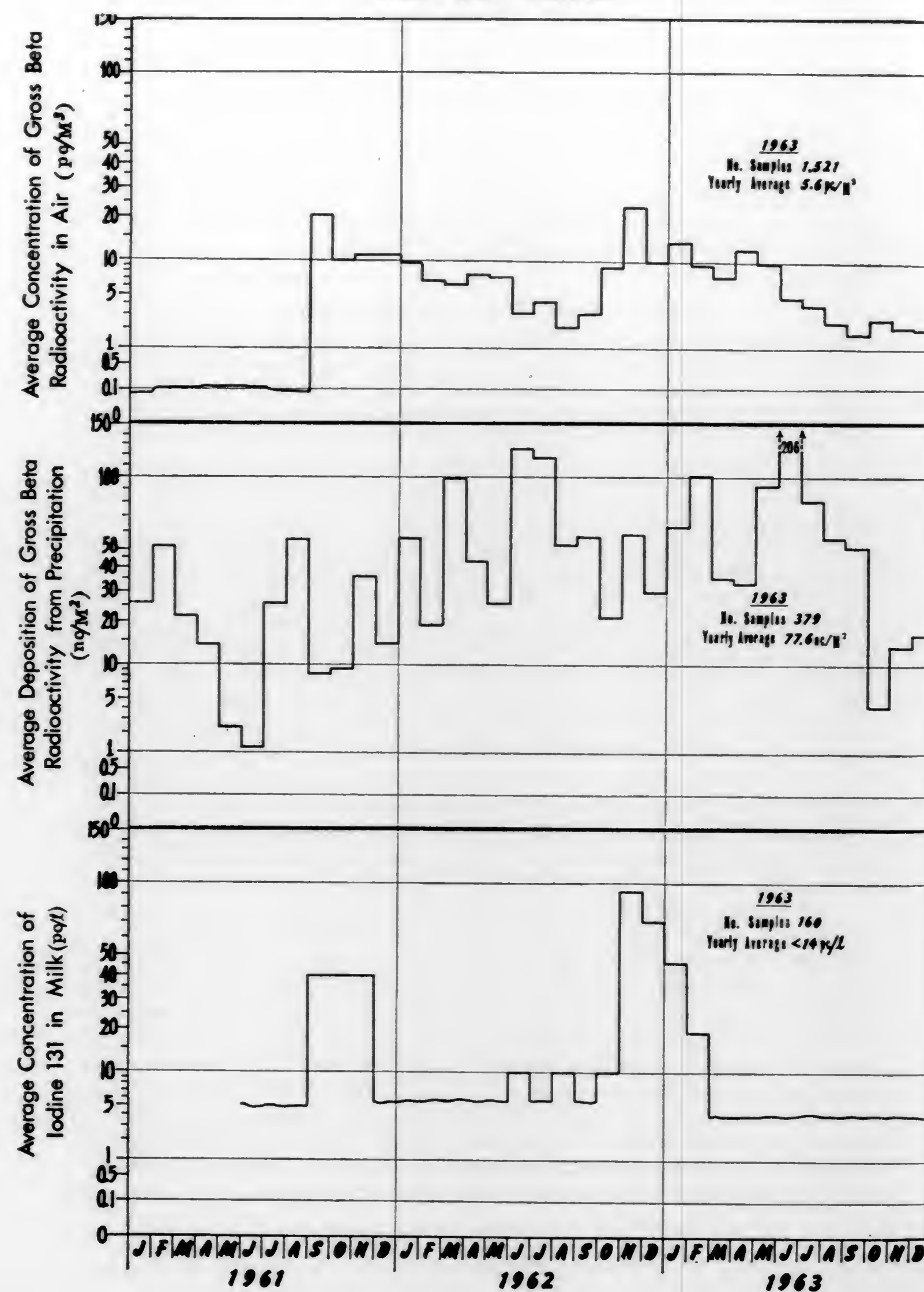


TABLE 21
A SAMPLE SUMMARY OF X-RAY SURVEY FINDINGS,
FLORIDA, 1963

DENTAL MACHINES			OTHER DIAGNOSTIC MACHINES		
	Number	Per Cent		Number	Per Cent
Machines in sample.....	449		Machines in sample.....	154	
Beam size corrected.....	98	22	Beam collimation recommended.....	49	32
Beam filtration corrected.....	164	37	Beam filtration recommended.....	28	18
			Beam alignment recommended.....	28	18
Installations in sample.....	284		Installations in sample.....	120	
Recommendation for reducing personnel exposure.....	111	39	Recommendation for reducing personnel exposure.....	54	45

TABLE 22
PARTICIPANTS IN FLORIDA X-RAY EXPOSURE RESEARCH
STUDY BY FACILITY TYPE,
SEPTEMBER 1961 - AUGUST 1963

Facility Type	Offices in study area with X-Ray	Participating offices	Number of X-Ray machines
Health department.....	2	2	2
Hospital.....	6	6	29
Podiatrist.....	4	4	4
Osteopath.....	2	2	3
Dentist.....	52	49	69
Chiropractor.....	15	13	14
Physician (M.D.).....	37	32	46
TOTAL.....	118	108	167

TABLE 23
EXCESSIVE PATIENT EXPOSURE DUE TO MACHINE
DEFICIENCIES BEFORE AND AFTER SURVEY, FLORIDA
EXPOSURE RESEARCH STUDY,
SEPTEMBER 1961 - AUGUST 1963

Type of examination	Number of patients exposed in typical four week period			
	Before survey		After survey	
	Number	Per cent	Number	Per cent
Dental X-ray				
Total patients.....	1440	100.0	1440	100.0
Excessive exposure due to inadequate beam infiltration.....	384	26.0	0	0.0
Excessive exposure due to excessive beam size.....	44	3.1	0	0.0
Chest radiograph				
Total patients.....	3230	100.0	3230	100.0
Excessive exposure due to excessive beam size.....	2631	81.5	20	0.6
Excessive exposure due to inadequate beam filtration.....	196	6.1	11	0.4

OCCUPATIONAL HEALTH

Each year as the industrialization of the state proceeds, there is an increased need for occupational health services which the SBH and the several CHDs should provide. Recognition of this increased need has lagged seriously. However, there is a quickening of interest in the occupational health field and the future seems more promising.

The special program in occupational health in Hillsborough County continued as outlined in the 1961 and 1962 Annual Reports until midyear when the contract was terminated. The program has been absorbed by the CHD as an integral part of its operation, but with shifting of emphasis from the attitude of "taking the occupational health pulse of the community" to one of "implementing an appropriate occupational health program in the community." The SBH and the USPHS are continuing to offer encouragement and support to the program, primarily in consultative and laboratory services. The CHD has employed an industrial hygienist to deal with environmental aspects of the program and has embarked upon an intensified occupational health nursing project now in the pilot stage, wherein the CHD is offering nursing services to selected industries in the community.

Efforts to motivate establishment of active programs in occupational health in additional local health units continued throughout the year. Most of them have assigned staff members to participate in field surveys and studies performed by division personnel within the unit's jurisdiction.

Although the number of Occupational Disease Reports received through the FIC in 1963 was less than in previous years, dermatitis continued to be the most frequently reported condition.

Field Activities

During the year, occupational health personnel made 113 visits to 72 establishments employing more than 15,000 persons. These figures show some increase in field activity over 1962 totals, reflecting the slight net increase in personnel time available for field work which was effected by the assignment of an industrial hygienist from the USPHS.

Cooperation with the FIC continued to be close as in the past. Field studies carried out at the request of the FIC included: a noise study at a new operation in a well established manufacturing plant; studies of solvent vapor exposures in a plastic shop, in a degreasing shop, in a dry cleaning operation and in a printing shop; and an investigation of a fatal diving accident.

Services were made available to several agencies of the Federal government. Notable among the studies was an investigation of alleged carbon tetrachloride exposures in the vicinity of check-cancelling machines in an office building. The recommendations made for improving the work environment were carried out.

Close cooperation continued with the other bureaus and divisions of the SBH. Among the problems investigated jointly with the Bureau of Sanitary Engineering was a community noise problem created by a sewage pump. The recommendations made resulted in corrective action which markedly reduced the noise levels. Typical of the service provided to the Bureau of Laboratories was the evaluation of an extremely annoying noise problem created by improper installation of a bacteriological hood exhaust fan. The recommendations made were carried out and resulted in a quiet, efficient installation.

Most of the problems investigated came to the attention of division personnel through the CHDs. Close cooperation with a few CHDs resulted in studies involving community noise problems near an airport, benzene exposures in a tire recapping plant, glue spraying operations in a box company and a leaking gas line in a bar.

Frequently, the division was asked to investigate nonoccupational problems because the unique training and equipment of division personnel best suit them to perform the necessary investigative work. Typical and recurring examples of this type of problem were the community noise studies, the gas leak in a bar and the analyses of air from a SCUBA tank.

Often field studies assume the form of follow-ups of laboratory findings. Typical of studies resulting from laboratory activities were investigations of the environments of individuals on whom high biological lead results had been reported. An investigation of alleged lead poisoning in an individual residing near a lead smelting plant led to the finding that the original report of high biological lead was erroneous.

Laboratory Activities

Lead analyses continued to outnumber other types of determinations made in the occupational health laboratory. From a total number of 197

samples received for lead analysis, 156 were requests from hospitals, physicians and industry. The remainder covered a variety of materials and substances including a toy stuffed duck to determine the potential hazard of a child being stricken with lead poisoning from ingesting paint from the toy. Several air samples for lead analysis were collected in automobile battery manufacturing plants to find the work areas which were of most danger to the employee for lead poisoning.

Dust determinations and fluoride analysis on samples collected in connection with the continuing phosphate industries studies made up the bulk of the remaining samples received by the laboratory for analysis.

Other analyses of interest performed by the laboratory were made on plaster to establish the presence of tobacco tars. The occupants of a private home equipped with a heat pump which continually recirculated the air in the house, were chain smokers who did not know that the cigarette smoke would stain and mar the interior of a house under these conditions. Provision of fresh make-up air was recommended to correct the problem.

SUMMARY OF OCCUPATIONAL HEALTH ACTIVITIES, FLORIDA, 1963

FIELD ACTIVITIES

Number of persons or establishments given service	72
Workers employed	15,280

Personnel Visits to Plants

Self-initiated	30
Requests or complaints	52
Agency referrals	15
Revisits	16
Total	113

Field Determination of Atmospheric Contaminants

Carbon tetrachloride	15
Combustible gases	11
Ammonia	7
Sulfur dioxide	5
Carbon monoxide	1
Hydrogen sulfide	1
Total	40

Services Rendered

Routine inspection	27
Industrial hygiene survey	35
Technical study	5
Consultation	16
Follow-up	7
Discuss report	1
Non-occupational investigation	6
Total	97

Physical Conditions

Noise measurements	88
Temperature and relative humidity	2
Ventilation	2
Total	92

SAMPLES COLLECTED FOR LABORATORY ANALYSIS

Fluoride in air	78	Formaldehyde in air	8
Dust in air	57	Dust (for gravimetric analysis)	4
Lead in air	12	Miscellaneous	10
Total	169		

LABORATORY ACTIVITIES

Materials	Type of Sample	Source	Analyses
Lead	Human fluids and tissues	Physician, hospital and industry	156
	Atmospheric	Industry	25
	Water	Physician and state agency	8
	Paint, plaster, dust	Physician and state agency	8
Dust	Atmospheric	State agency	57
Chromates, fluorides	Air	Industry	44
Ammonia, formaldehyde	Air	Industry, state agency	10
Ash, organic matter, pH	Sludge, plaster	Industry, private home	9
Free silica, iron	Air, dust	Industry, state agency	5
Microscopic examinations	Dust	State agency	3
Particle sizing			6
Miscellaneous			274
		Total	246
Reagents, blanks, controls and standards			520
		Total	

OCCUPATIONAL DISEASE REPORTS RECEIVED THROUGH FLORIDA INDUSTRIAL COMMISSION, 1963

Dermatitis by cause	199
Detergents or other chemicals	45
Cement	37
Agricultural products	14
Plants, vegetables	12
Citrus	11
Agricultural chemicals	19
Larva migrans, fungus	18
Seafoods, other foods	13
Paint, petroleum products, solvents	30
Miscellaneous	60
Systemic poisoning by cause	20
Parathion	20
Chemicals, excluding Parathion	20
Heat exhaustion, infections, other conditions	51
Conjunctivitis by cause	45
Welders	6
Other	

DIVISION OF TUBERCULOSIS CONTROL

DWIGHT J. WHARTON, M.D.
Director

Prior to 1959 there was an annual decline in the number of new cases of tuberculosis reported in this state with a corresponding decline in case rates. Since 1959 the number of new cases has risen by more than 23 per cent and the case rate by almost seven per cent. This trend is reflected on a national level with more cases reported in 1962 than 1961. Officials of the U.S. Public Health Service (USPHS) are quoted as believing this rise in number of new cases is due to better detection and more accurate reporting of new cases. The Surgeon General, USPHS, said, "Nearly 55,000 new cases of a communicable disease as serious as tuberculosis, reported in a single year, are a forceful reminder of the continuing importance of tuberculosis control."

MORBIDITY AND MORTALITY

Data on morbidity and mortality for the past 10 years are given in Table 24. The number of new cases in this table has been a preliminary total without indication of that fact. The preliminary total contains a small number of cases which has the diagnosis of tuberculosis changed to a non-tuberculosis condition after further study. Tuberculosis is a disease that is not easily and rapidly diagnosed and a patient may be in a hospital for weeks or even months before a definite diagnosis can be established. The preliminary total of 1439 new cases for 1962 was reduced to 1385 when all diagnoses were established. The total for 1961 was reduced from 1359 to 1318.

There were 1563 new cases of tuberculosis with the stage of disease specified and of these 14.1 per cent had minimal disease, 35.7 per cent were moderately advanced and 33.3 per cent far advanced. Primary tuberculosis accounted for 127 new cases with 89 of these being treated at home.

CASE DETECTION

There has been a slight change in case detection methods each year for several years with emphasis on the population groups believed to be at high risk compared to the general population. One such group is the household and intimate contacts of newly discovered cases having active infectious disease. That this group is productive of new cases is shown by the rise of cases in those under 15 years of age from 59 in 1958 to 133 in 1963. Few of these are discovered because of clinical evidence of disease but are found by searching out intimate contacts of newly detected cases and examining them.

Emphasis is also placed on case detection in adults who are in close contact with children, such as school employees, music and dancing teachers, Sunday School personnel, etc. This group has a low rate of new cases but the intimate contact with non-infected children makes it important to find the few cases as a preventive measure.

County health departments (CHD) continue to devote increasing efforts in case detection as shown by a marked increase admission to service of contacts and suspects and also in number of tuberculin tests done. This increased effort confirms the opinion of USPHS officials that the national increase in number of new active cases, in this state at least, is due to better case detection and reporting.

Pathology other than tuberculosis is detected in reviewing 70mm X-ray screening films. There were 700 instances of tumor and 2100 instances of cardiovascular disease reported and other pathology was noted 6981 times.

OTHER X-RAY SERVICES

Operation of a portable 14 by 17 X-ray unit was continued providing this type of X-ray service to all CHDs not having such facilities. Services of 70 mm X-ray units are continued both for screening surveys and to provide chest X-rays for those individuals who add to the risk of spreading tuberculosis. Processing and interpretation of X-ray film for CHDs has been continued. X-ray film is provided for units operating under direction of CHDs where the primary purpose of the use is tuberculosis case detection and follow-up.

ACTIVITIES OF COUNTY HEALTH DEPARTMENTS

Personnel of CHDs continue to carry much of the burden of tuberculosis control throughout the state. Evidence of the good work is shown by the annual increase in tuberculin testing, the better case detection among young individuals and the increase in office and field visits in this program.

SPECIAL ACTIVITIES

Special screening projects in tuberculosis are in effect in Dade and Hillsborough Counties through grants from the USPHS. The special project in Dade County was started early in 1961 and is being continued indefinitely. A new project was started in Hillsborough County in January and will continue on an indefinite basis depending upon need and availability of funds. Both projects are extremely successful and worthwhile.

CENTRAL CASE REGISTER

Central Case Register data are shown in Tables 28 and 29. It is believed that these data more accurately reflect the tuberculosis picture now in Florida than in recent years. Comparison of CHD registers with the Central Register has been done to a greater degree than in recent years and this has increased the accuracy of the records.

The mandatory follow-up period for inactive cases is now three years and this has reduced the number of inactive cases from more than 8000 five years ago to 4589 now. Also the number of active and quiescent cases has been reduced from 3250 five years ago to a present total of 2584.

This reduction in number of cases in the case registers does not reflect a similar decrease in the work load of tuberculosis control personnel.

Inactive cases continue to have voluntary follow-up with sputum and X-ray examinations. Interstate and intercounty transfer of records follow the movements of tuberculosis persons throughout their lifetime and this involves much record keeping.

There are 324 cases of primary tuberculosis carried in the Central Case Register. There are 32 cases in the hospital, 86 at home with active disease and 206 at home whose disease is now inactive.

There were 206 cases of tuberculosis reported by transfer from other states and there were entered in the case registers for follow-up but these are no longer counted as new cases in Florida. Fifty-seven persons having inactive disease were also reported.

TABLE 24
NEW ACTIVE TUBERCULOSIS CASES AND TUBERCULOSIS DEATHS WITH RATE PER 100,000 POPULATION, BY RACE, FLORIDA, 1954-1963

YEAR	Cases reported	Case rate	TOTAL DEATHS		WHITE		NONWHITE	
			Deaths	Rate	Deaths	Rate	Deaths	Rate
1963*	*1563	27.7	*245	4.3	*153	3.3	*92	9.3
1962	1439	26.9	216	4.0	136	3.1	80	8.4
1961	1359	26.4	217	4.2	146	3.4	75	8.1
1960	1295	26.2	205	4.2	128	3.2	78	8.3
1959	1271	26.5	233	4.9	161	4.3	65	7.4
1958	1553	34.4	287	6.4	193	5.4	94	11.1
1957	1716	40.8	257	6.0	165	4.8	92	11.5
1956	1976	50.9	244	6.3	156	4.9	88	12.0
1955	1786	51.7	281	7.7	175	6.0	106	14.6
1954	1912	54.9	283	8.1	159	5.7	124	18.1

*Provisional totals

TABLE 25
NUMBER AND PERCENTAGE OF REPORTED ACTIVE CASES OF TUBERCULOSIS BY STAGE OF DISEASE, RACE AND SEX, AND SOURCE OF REPORT, FLORIDA, 1962 - 1963

Stage of Disease, Race and Sex, Age, and Source of Report	1963		1962	
	Case	Per cent	Case	Per cent
TOTAL ACTIVE CASES	1,563	100.0	1,439	100.0
STAGE OF DISEASE				
Primary	127	8.1	136	9.5
Minimal	221	14.1	169	11.7
Moderately advanced	558	35.7	527	36.6
Far advanced	519	33.3	476	33.1
Non-pulmonary	94	6.0	94	6.5
Not stated	* 44	2.8	37	2.6
RACE AND SEX				
White male	619	39.6	567	39.4
White female	268	17.1	264	18.4
Nonwhite male	457	29.3	405	28.1
Nonwhite female	219	14.0	202	14.0
Not stated			1	0.1
AGE				
Under 5	81	5.2	89	6.2
5-14	52	3.3	64	4.4
15-24	110	7.0	103	7.1
25-44	482	30.9	495	34.4
45-64	565	36.2	483	33.6
65 plus	271	17.3	194	13.5
Not stated	2	.1	11	0.8
SOURCE OF REPORT				
Health departments	718	46.0	698	48.5
Sanatoria	123	7.9	103	7.2
Private physicians	437	28.0	407	28.3
General hospitals	121	7.7	95	6.6
Death certificates	26	1.6	32	2.2
Veteran's hospitals	72	4.6	53	3.7
State prisons	17	1.1	10	0.7
State mental hospitals	17	1.1	15	1.0
Other	32	2.0	26	1.8

*Stage not reported on 26 deceased cases.

TABLE 26
RESULTS OF 70mm X-RAY SCREENINGS, FLORIDA, 1963

SCREENING UNITS	70mm X-RAYS		FOLLOW-UP STUDIES						
	Total X-Rays	Definite or Suspected Tuberculosis	FINDINGS			NEW CASES FOUND BY STAGE			
			Percent Follow-up	New Cases	Diagnosis Reserved	Minimal	Moderately Advanced	Far Advanced	Other**
TOTAL.....	620,633	4898	84.8	217	700	56	83	71	7
Alachua Sur.....	11,803	66	100.0	1	7	0	0	1	0
Alachua HD.....	6,035	55	100.0	6	0	0	3	3	0
Bradford Sur.....	469	4	100.0	0	1	0	0	0	0
Broward HD.....	53,682	468	99.1	18	241	1	7	8	2
Calhoun Sur.....	1,580	22	100.0	0	1	0	0	0	0
Charlotte Sur.....	4,073	23	100.0	0	0	0	0	0	0
Citrus Sur.....	668	2	100.0	0	0	0	0	0	0
Clay Sur.....	800	2	100.0	0	0	0	0	0	0
Collier Sur.....	6,045	44	100.0	2	6	0	1	1	0
Columbia Sur.....	1,072	15	93.8	0	5	0	0	0	0
Dade Sur.....	9,665	79	91.1	8	6	0	4	3	1
Dade HD & others.....	95,016	1003	92.2	15	125	0	6	9	0
Duval Sur.....	339	1	100.0	0	0	0	0	0	0
Duval HD.....	5,077	21	95.2	0	0	0	0	0	0
Duval Co. Jail.....	3,762	82	87.8	1	9	0	1	0	0
Jacksonville HD.....	28,695	285	100.0	15	29	3	6	6	0
Escambia Sur.....	31,641	214	98.1	24	12	16	5	3	0
Escambia HD.....	13,076	69	100.0	17	4	5	5	7	0
Flagler Sur.....	339	3	100.0	0	0	0	0	0	0
Gadsden Sur.....	3,956	24	100.0	2	5	1	0	1	0
Gadsden HD.....	1,721	16	Follow-up not available						
Glades Sur.....	1,094	12	100.0	1	1	0	0	1	0
Hamilton Sur.....	332	4	100.0	0	2	0	0	0	0
Hardee Sur.....	664	1	100.0	0	0	0	0	0	0
Hendry Sur.....	2,124	14	100.0	1	4	0	1	0	0
Hernando Sur.....	1,227	28	85.7	1	8	0	0	1	0
Hillsborough HD & Assn.....	72,595	493	Follow-up not available						
Holmes Sur.....	1,370	15	86.7	0	4	0	0	0	0
Indian River Sur.....	456	2	100.0	0	0	0	0	0	0
Jackson Sur.....	1,288	4	100.0	0	2	0	0	0	0
Jefferson Sur.....	661	3	100.0	0	1	0	0	0	0
Lake Sur.....	13,279	69	100.0	5	6	1	3	1	0
Lake HD.....	379	3	Follow-up not available						
Lee HD.....	12,437	79	100.0	2	2	0	0	1	1
Leon HD.....	13,340	63	100.0	7	12	2	3	1	1
Levy Sur.....	1,204	15	100.0	0	1	0	0	0	0
Liberty Sur.....	336	2	100.0	0	0	0	0	0	0
Madison Sur.....	2,825	29	65.5	1	2	0	0	1	0
Manatee HD.....	7,339	52	98.1	6	9	0	4	2	0
Marion Sur.....	3,375	24	95.8	0	3	0	0	0	0
Nassau Sur.....	537	3	100.0	0	0	0	0	0	0
Okaloosa Sur.....	7,753	49	100.0	1	11	0	0	1	0
Okeechobee Sur.....	1,364	12	75.0	0	1	0	0	0	0
Orange HD.....	23,654	118	88.1	2	20	0	0	2	0
Osceola Sur.....	362	4	100.0	0	0	0	0	0	0
Osceola HD.....	600	3	Follow-up not available						
Palm Beach Sur.....	26,285	197	95.0	22	28	8	10	4	0
Palm Beach HD.....	18,381	109	94.4	11	11	0	7	3	1
Pasco Sur.....	5,226	45	100.0	0	8	0	0	0	0
Pinellas HD.....	29,310	209	93.3	4	31	0	2	2	0
Polk Sur.....	16,929	119	36.9*	0	7	0	0	0	0
Polk HD.....	24,441	93	100.0	14	26	5	3	5	1
St. Johns Sur.....	1,161	7	28.6	1	0	0	1	0	0
Santa Rosa Sur.....	3,707	42	100.0	3	7	0	2	1	0
Sarasota Sur.....	15,810	117	94.0	3	25	0	2	1	0
Sarasota HD.....	3,525	28	Follow-up not available						
Seminole Sur.....	1,269	4	100.0	0	0	0	0	0	0
Seminole HD.....	725	4	100.0	0	0	0	0	0	0
Sumter Sur.....	2,203	13	100.0	2	0	0	1	1	0
Sumter HD.....	536	4	100.0	0	0	0	0	0	0
Suwannee Sur.....	977	4	100.0	0	2	0	0	0	0
Taylor Sur.....	535	2	100.0	1	0	0	1	0	0
Union Sur.....	605	10	90.0	0	4	0	0	0	0
Volusia Sur.....	2,403	4	100.0	0	1	0	0	0	0
Wakulla Sur.....	417	1	100.0	0	1	0	0	0	0
Walton Sur.....	2,227	17	100.0	1	3	0	1	0	0
Washington Sur.....	1,689	15	100.0	1	4	0	0	1	0
State Prisons.....	3,211	21	100.0	5	0	3	2	0	0
Mental Hospitals.....	7,541	229	100.0	13	2	11	2	0	0
Federal Agency.....	411	0							

* Survey ended December 21, 1963.

**Other: Primary, military, and stage unknown.

TABLE 27
RESULTS OF STATE X-RAY SURVEY UNITS,
FLORIDA, 1963

RACE, SEX AND AGE	70mm X-RAYS		14" x 17" X-RAY FOLLOW-UP						*New Case Rate
	Total X-Rays	Definite or Suspected Tuberculosis	FINDINGS		NEW CASES BY STAGE				
			New Cases	Diagnosis Reserved	Minimal	Moderately Advanced	Far Advanced	Other	
TOTAL.....	204,864	1638	99	185	40	36	22	1	48.3
RACE AND SEX									
White male.....	75,182	777	29	84	13	10	5	1	38.6
White female.....	81,445	405	15	45	8	3	4	0	18.4
Nonwhite male.....	24,765	302	37	35	15	14	8	0	149.4
Nonwhite female.....	21,455	130	16	17	3	9	4	0	74.6
Not stated.....	2,067	24	2	4	1	0	1	0	96.7
AGE									
18-24.....	27,987	45	6	5	2	2	1	1	21.4
25-34.....	38,349	119	18	14	11	3	4	0	46.9
35-44.....	42,612	234	27	31	10	9	3	0	63.8
45-54.....	40,352	361	26	44	10	12	4	0	64.4
55-64.....	29,556	406	18	41	4	6	3	0	44.0
65 and over.....	24,140	449	9	46	3	4	2	0	37.2
Not stated.....	1,868	24	0	4	0	0	0	0	.....

* Rate per 100,000 satisfactory 70mm x-rays.

TABLE 28
TUBERCULOSIS CASES IN CENTRAL REGISTER, BY COUNTY
STAGE OF DISEASE AND ACTIVITY,
FLORIDA, 1963

COUNTY	Total Cases	Pulmonary Tuberculosis					Active Cases			
		Active	Quiescent	Inactive	Primary	Non-Pulmonary	*In Hospital	At Home by Sputum Status		
								Positive	Negative	None 1963
STATE.....	7,620	1,688	896	4,589	324	123	1,202	140	274	72
Alachua.....	166	26	16	118	3	3	17	2	5	2
Baker.....	21	8	2	9	1	1	7	1		
Bay.....	125	21	7	93	2	2	15	2	2	2
Bradford.....	41	3	5	32		1	3			
Brevard.....	134	24	15	87	6	2	12	2	8	2
Broward.....	484	98	48	307	21	10	70	10	10	8
Calhoun.....	26	1	2	20	2	1	1			
Charlotte.....	14	4	2	8			2	2		
Citrus.....	12	1	4	7			1			
Clay.....	16		1	14						
Collier.....	57	11	3	37	4	2		2		3
Columbia.....	56	5	2	49			5			
Dade.....	1,266	316	151	731	34	34	232	18	57	9
DeSoto.....	17		3	13	1		1			
Dixie.....	4	2		2			1	1		
Duval.....	688	160	86	399	30	13	122	14	22	2
Escambia.....	222	69	22	126	2	3	60	4	2	3
Flagler.....	9	1	1	7			1			
Franklin.....	10	4	1	5			2	1	1	
Gadsden.....	67	14	7	44	2		13			1
Gilchrist.....	7		1	6						
Glades.....	4	1		3			1			
Gulf.....	15	6		9			6			
Hamilton.....	16	6	2	8			5			1
Hardee.....	19	3	4	9	3		2			1
Hendry.....	21	7	2	11	1		7			
Hernando.....	12	5	2	4	1		1	1	1	2
Highlands.....	42	9	5	24	4		7	1	1	
Hillsborough.....	698	212	85	375	20	6	145	17	43	7
Holmes.....	19	9	2	8			7	1		1
Indian River.....	41	6	8	25	1	1	6			
Jackson.....	75	18	12	36	5	4	15	1	1	1
Jefferson.....	12			11	1					
Lafayette.....	3			3						
Lake.....	91	19	13	51	5	3	11	3	4	1
Lee.....	88	20	13	45	9	1	17	1	1	1
Leon.....	63	12	9	54	7	1	7		5	
Levy.....	18	3	4	10			2	1		
Liberty.....	12	2	2	8					1	1
Madison.....	22	3	3	16				1	1	1
Manatee.....	81	20	8	50	2	1	12	2	5	1
Marion.....	67	13	10	41	1	2	5	2	6	
Martin.....	31	9	4	16	1	1	9			
Monroe.....	38	8	6	23		1	6		1	1
Nassau.....	18	1	2	11	1	3			1	
Okaloosa.....	49	17	7	25			14	1	2	
Okeechobee.....	15	1	2	9	3			1		
Orange.....	262	52	24	165	15	6	33	7	11	1
Osceola.....	29	8	5	14	1	1	3	4		1
Palm Beach.....	495	97	95	251	47	5	83	3	9	2
Pasco.....	34	4	10	20			3			1
Pinellas.....	460	106	40	302	10	2	46	21	36	3
Polk.....	356	73	41	195	44	3	50	3	19	1
Putnam.....	71	10	7	49	4	1	5		4	1
St. Johns.....	78	8	8	61		1	8			
St. Lucie.....	129	17	18	90	2	2	14		1	2
Santa Rosa.....	19	5	1	13			5			
Sarasota.....	106	20	9	67	10		14	3	2	1
Seminole.....	113	22	12	73	6		19	1	2	
Sumter.....	28	5	4	17	1	1	5			
Suwannee.....	40	9	4	26	1		4	3	1	1
Taylor.....	24	2	3	16	2	1	2			
Union.....	10		2	8						
Volusia.....	194	39	22	124	7	2	26	3	6	4
Wakulla.....	7	1	2	4					1	
Walton.....	32	4	3	25			1		1	2
Washington.....	27	9	2	16			7		1	1
Florida State Prison.....	74	19		54		1	19			

*Does not include 32 Primary Cases in the hospital.

TABLE 29
TUBERCULOSIS CASE REGISTER STATISTICS,
FLORIDA, 1959-1963

Tuberculosis Cases by Activity, Location and Sputum Status	Number of Cases					Per Cent Distribution				
	1963	1962	1961	1960	1959	1963	1962	1961	1960	1959
TOTAL CASES IN REGISTER.....	7,620	7,694	9,627	10,135	10,918	100.	100.	100.	100.	100.
Active pulmonary.....	1,688	1,790	1,785	2,623	2,942	22.1	23.3	18.6	25.9	27.0
Quiescent.....	896	817	582	Not available	2,942	11.8	10.6	6.0	Not available	2.7
Questionably active.....	*	*	*	207	299	*	*	*	2.0	2.7
Inactive pulmonary.....	4,589	4,765	6,971	6,851	7,225	60.2	62.0	72.4	67.6	66.2
Primary.....	324	250	211	264	261	4.3	3.2	2.2	2.6	2.4
Non-pulmonary.....	123	72	78	190	191	1.6	.9	.8	1.9	1.7
ACTIVE PULMONARY. Hospitalized**.....	1,688	1,790	1,785	2,623	2,942	100.	100.	100.	100.	100.
At home.....	486	550	513	1,224	1,425	28.8	30.7	28.7	46.7	48.4
ACTIVE CASES AT HOME.....	486	550	513	1,224	1,425	100.	100.	100.	100.	100.
Positive sputum.....	140	130	164	198	238	28.8	23.6	32.0	16.2	16.7
Negative sputum.....	174	298	222	605	651	56.4	54.2	43.3	49.4	45.7
Undetermined sputum.....	72	122	127	421	536	14.8	22.2	24.7	34.4	37.6

* USPHS Instructions—questionably active and activity undetermined—not to be reported.
**The 1963 figure does not include 32 Primary Cases in the hospital.

DIVISION OF VETERINARY PUBLIC HEALTH

JAMES B. NICHOLS, D.V.M.
Director

This division has as its major function the control of animal diseases transmissible to man. Working cooperatively with the private practicing veterinarians, the State Department of Agriculture (SDA), the U.S. Department of Agriculture (USDA), county health departments (CHD), and the U.S. Public Health Service (USPHS), a considerable amount of progress continues to be registered in all phases of the division's activities. The relatively large number of animal diseases transmissible to humans continues to present a challenge to all of those concerned with the many different facets of control and eradication.

The Animal Morbidity Report System operated by the division is an exceptionally fine tool for use in surveillance and control of many infectious diseases. The widespread distribution of each monthly morbidity report enables each CHD, private practicing veterinarians and persons working in various agricultural agencies to gain knowledge about the prevalence of different diseases in their respective localities. Action was taken during the year to enlarge the report and in doing this, it is now possible to report 15 additional diseases in tabular form.

Brucellosis — Four cases of human brucellosis were reported during the year. An epidemiological study was made of each case with a view of determining the source of infection. One case occurred in a dairy farm worker, one in a veterinarian, one in a person who regularly consumed

raw milk from a commercial dairy farm and one was infected by an undetermined source.

During the year the USDA in cooperation with the SDA tested 13,121 herds which involved 255,693 head of cattle. The tests yielded a total of 4435 reactors. When compared with last year's statistics this represents approximately the same percentage of reactors. In addition there were 386 swine herds tested, consisting of 4710 swine. A total of 89 of the herds were found to be infected, with 415 reactors disclosed. The swine testing program in Florida is a new innovation as far as the USDA participation is concerned. The relatively high degree of infection most certainly indicates that the program is worthwhile because nationally, swine are the most common sources of human infections.

Close cooperation with the USDA enables the division to assist in many ways in the brucellosis eradication program involving dairy herds.

Arthropod-borne Encephalitis—A total of 31 cases of Eastern Equine Encephalitis (EEE) were reported in horses during 1963. This represents a slight decrease over the previous year. Since immunization against this disease is quite effective, the horse-owning public is encouraged by every available means to vaccinate their animals during the early spring of each year. Results are gratifying because it is estimated that from 90-95 per cent of all horses are immunized against EEE. The high vaccination rate and the relatively high number of reported cases gives rise to the belief that there is a large amount of virus circulating in the upper half of the peninsula and West Florida where the cases occurred.

During the summer months four outbreaks of viral encephalitis in chuckar partridges being raised in the northeastern part of the state were reported by the SDA Poultry Disease Diagnostic Laboratory at Callahan. Three of these were diagnosed as EEE and one was diagnosed as Western Equine Encephalitis. At about the same time the SDA Diagnostic Laboratory in Dade City reported an outbreak of EEE in Pasco County involving the same species. All of the birds were being raised in small backyard operations. Of special interest was the fact that even though all of the operators were raising the highly susceptible pheasants on the same premises only one flock of this species registered any morbidity or mortality. A veterinarian of the division performed an epizootological survey of each outbreak.

In participating in the new statewide encephalitis surveillance program, veterinarians of the division started late in the year to bleed selected birds from small backyard chicken flocks. Since this species has proved to be a good sentinel for arbovirus activity, 30 counties were selected from areas most likely to be affected. Ten chickens were bled at one or more sites in each county. Specimens were stored in the State Board of Health (SBH) central laboratory awaiting serological studies. Information gained from these studies will be used in determining further steps to be taken in encephalitis surveillance and control.

Equine Influenza — Of considerable interest during the late winter months was an outbreak of equine influenza which occurred at race tracks in the southern part of the state. It was believed that the infection was

introduced by some horses which had been brought in from Argentina a short time earlier. As the racing season ended in Florida, horses were moved to northern and middle western tracks where severe epizootics were subsequently noted. Since early observations revealed that the disease was caused by a Type A Influenza virus, but of a previously unknown sub-type, and because it was believed to be linked to human infections, extensive studies were undertaken by many investigators. Illnesses in humans who had in some way been associated with affected horses led to the belief that the disease may have been common to both. No conclusive findings were developed which would indicate that the numerous reports of human illnesses in persons had been transmitted from horses. The new virus was designated as A2-Equine/Miami/63. Liaison with veterinarians and others in the Miami area did not reveal development of any new cases at year's end.

Leptospirosis — There were 316 cases of leptospirosis reported in animals during the year. Of the total number of cases, 10 involved cattle and 306 were recorded in dogs. Three human cases were reported, and several suspects were under further study at the end of the year. One of the positive cases involved a dairy farm worker, another person lived on a small wooded farm near a lake, and the epidemiological study of the third case was not completed at the year's end. Serological studies of the second case mentioned above revealed that this person was infected with *L. hyos*, which has been isolated from wildlife. According to the records of the Communicable Disease Center, USPHS, this was the first time that this particular serotype was reported in man.

Mycotic and parasitic diseases continue to be one of the most prevalent of the zoonoses in Florida. Of the 274 cases of ringworm reported, 256 were found in dogs and cats, and 18 in large animals. The common hookworms of dogs and cats (*Anclostoma braziliense* and *A. caninum*) are indirectly responsible for a large number of cases of creeping eruption (cutaneous larva migrans) in humans. The larvae of these parasites are the cause of a large number of cases of dermatitis in children, and others whose occupation brings them in frequent contact with the soil. Effective control methods which would fit most situations are not available. While it is quite unlikely that larvacides will be developed in the foreseeable future, personnel of the division will continue to study all matters relating to this problem.

Rabies — is one of the most important animal diseases transmissible to man. This is because of the potential danger of the relatively large number of laboratory confirmed cases and because of the workload generated by surveillance, educational programs and effort expended in observational procedures following the bites of suspected animals. There were 90 laboratory confirmed cases reported in the state for the year. This figure represents an increase of 18 over last year. Infected raccoons far outnumbered all other species. This is of special interest because it was expected that the northern movement of this enzootic through the upper peninsula would have led to its disappearance from Florida by the end of the year. However, the disease remained in the upper part of the

state and at the same time rabid raccoons appeared in abundance in neighboring Georgia counties.

A meeting which included representatives of CHDs of the upper peninsula, the Game and Fresh Water Fish Commission, and several of the Georgia State Health units was held in Jacksonville during the early part of the year to discuss means of curbing raccoon rabies. While several approaches were considered, the decision was made to resort to the use of educational procedures which would warn the public about the disease in wildlife. Methods of reducing the raccoon population in affected areas were discussed in an effort to arrive at a suitable plan if such action became essential at a later date.

There were no human cases this year, but the number of bite cases remained high. Sufficient vaccine for 551, 14-dose treatments was distributed; 425 were brain tissue and 126 were duck-embryo vaccine. In addition, 91 vials of hyperimmune serum were distributed.

The division is now without the services of a biologist for the first time in many years. This is considered unfortunate because it was necessary to discontinue the wildlife rabies study, even though the number of reported cases is on the increase.

Tuberculosis-Bovine (TB) — The number of TB reactors detected in the state testing program increased almost threefold over last year. Statistics of the USDA revealed that 199,483 cattle were tested, with 292 reactors reported. During the year the division commenced publishing two new periodic reports concerning dairy cattle tested for tuberculosis, and tuberculosis infected herds. From information furnished by the SDA on this project, pertinent data is extracted and furnished to interested CHDs. This enables milk sanitarians to keep abreast of the TB testing program in their own county as well as neighboring counties.

TABLE 30
CASES OF ANIMAL RABIES BY TYPE OF ANIMAL
INFECTED, BY MONTH, FLORIDA, 1963

COUNTY	Dog	Cat	Fox	Raccoon	Skunk	Bat	Horse	Bobcat	Total
Alachua			1	7		2		1	11
Baker				3					3
Bradford			1	7					8
Brevard				1					1
Charlotte				1					1
Citrus				1					1
Clay				3					3
Collier				1					1
Duval				2		2			4
Flagler				1					1
Hamilton				1	1				2
Hendry					1				1
Hernando	1								1
Hillsborough				1		7			8
Jefferson				2					2
Lake				4				1	5
Lee				1					1
Leon				4					4
Levy			1	2					3
Madison				1	1				2
Marion	1			5	1				7
Martin				2					2
Monroe				1					1
Nassau				2					2
Orange				1					1
Osceola				1		1	1		3
Pinellas	1								1
Polk				1	1				2
Putnam				1		1			2
St. Lucie				1					1
Santa Rosa		1							1
Seminole				1					1
Sumter				1					1
Volusia				2					2
MONTH									
January	1		1	11		1		1	15
February				4		1			5
March	1			4		1			6
April	1			9	1	3		1	15
May				8	1	2			11
June		1		5					6
July			1	4		2	1		8
August				3	1				4
September			1	2	1	2			6
October				2	1	1			4
November				6					6
December				4					4
TOTAL	3	1	3	62	5	13	1	2	90

MILK SANITATION SECTION

S. O. NOLES, B.S., M.P.H.

Working with county health department (CHD) personnel on their milk quality control programs continues to be the most important function of this section. A twofold purpose is involved: continued in-service training of personnel concerned and development of greater uniformity in the interpretation and enforcement of sanitation requirements.

Another major activity is the inspection of milk plants and their producer-dairies for the purpose of determining if the sanitation compli-

ance ratings would justify recommendations for common carrier listing. The criteria for determining sanitation compliance ratings are based upon the U.S. Public Health Service (USPHS) recommended Milk Ordinance and Code. The responsibility for source approval of milk products and frozen desserts for common carriers is the function of this federal agency. State Board of Health milk consultants are examined and certified by USPHS personnel. The consultants survey plants and their producers and make recommendations as to their acceptability as common carrier suppliers. Most major milk plants are very interested in securing an approved listing.

Beginning January 1, 1964, any plants wishing to be recommended for the common carrier list must now attain a combined sanitation compliance rating for both plant and producer of at least 90. This represents a change in that prior to the above mentioned date it was necessary that only the plant be approved. Previously, dairy farms were not required to have any sort of approval. A satisfactory rating qualifies a plant for a period of two years. However, spot checks made periodically during this time must reveal that a satisfactory sanitation level is being maintained. These spot checks, or re-inspections, will demand a considerable amount of travel to all parts of the state by the milk consultants. The above mentioned surveys afford an excellent opportunity for working with sanitarians involved in quality control programs. If weaknesses are present, they are revealed, discussed with sanitarians and health officers concerned, and measures introduced for correcting them. A number of facets important to in-service training are covered in these surveys.

During the year one of the two milk consultants was transferred to another activity. A replacement has been selected to commence working during the early part of next year. Since it is frequently difficult for two milk consultants to fulfill all requests of CHDs to work with their personnel, and to keep sanitation ratings current, the above mentioned transfer has created a backlog which is expected to require at least a year to overcome.

The Central Milk Registry on all dairies and milk plants operating within the state incorporates information obtained from CHDs on establishment inspections and analyses obtained from the Bureau of Laboratories. Individual records thus established on each processor and dairy farm permits a quick appraisal of their sanitary status. It is of value to other interested CHDs and is constantly used by milk consultants in determining where their efforts are most needed.

Attempts have been made to correct unacceptable practices in handling and serving coffee cream and similarly used products which are stored, handled and dispensed in restaurants. Proposed legislation which would have required the labeling and placing of these products in their final serving containers in plants where they are processed, failed to receive favorable consideration. Plans are underway to secure and analyze data as to the actual conditions of these products in the environment in which they are being served. These data will be used in further attempts to secure corrective action.

Another development which is being observed with some measure of concern is the increased consumption of raw milk. "Q" fever has been detected in a number of herds in Florida. Undulant fever, aseptic sore throat, and other milk-borne diseases have well known histories of infection through the drinking of raw milk. Educational work aimed toward discouraging the consumption of raw milk is planned for the coming year.

Only five CHDs have secured the passage of laws requiring that only pasteurized milk and milk products be sold to consumers. The milk consultants will continue to work with CHDs in securing statewide coverage on a county basis which will permit the sale of only pasteurized milk and milk products.

Continued efforts are planned to keep all milk plants on a sanitation compliance rating of 90 or better. This will require greater effort on the part of both industry and regulatory personnel. CHDs will be encouraged to approve for school use only those milk supplies which maintain such a rating.

BUREAU OF SANITARY ENGINEERING

DAVID B. LEE, M.S., Eng.
Director

SIDNEY A. BERKOWITZ, M.S., Eng.
Assistant Director

The state continued to grow in population and in industrial development and parallel with such growth the activities and programs of this bureau likewise continue to grow. During the year, 2657 plans for water supply, waste water and industrial waste projects were processed and approved. This 13.5 per cent increase in one area of activity over the previous year is approximately twice the rate at which state population is growing. While no new programs were developed, each passing year requires that even the old programs be viewed in the light of the most recent knowledge and needs.

An activity carried over from the previous year was the development of an interagency agreement on shellfish control between the Conservation Department and this agency. The agreement was finally signed for both agencies in February and, as a consequence thereof, impetus was given to the program as discussed in the report of the Division of Special Services which follows.

STREAM SANITATION

The stream sanitation activities, as in previous years, accounted for a considerable volume of routine sampling and analyses as indicated in Table 31. The accumulation of data in the files has not yet been gathered together as had been intended. When staff permits, it is planned to retrieve all data and compile it for publication. Specific studies of surface waters were undertaken and reports had been published or were in process of preparation. In the sections that follow are set out details of activities in the several regional programs.

Pensacola Regional Staff

Monitoring of surface waters in northwest Florida continued to be the primary objective of the Pensacola facilities for the year. The major area kept under continued surveillance was the extreme western portion of the area, with particular reference to Escambia River (south) and Bayou Chico.

Major disruption of the water quality in the lower Escambia River continued all year until results of sampling indicated that other means of control were required. A request for legal action against Chemstrand Corporation was initiated in the latter part of the year.

Stream quality surveys were conducted on the entire Escambia River, Bayou Chico, Blackwater River, Bayou Marcus Creek and Choctawhatchee Bay. Only portions of the two latter areas were surveyed and not published in a report form.

Due to expanded facilities at a paper mill, north of the Alabama-Florida state line, a complete survey of the Escambia River was conducted. Work included chemical, bacteriological and biological analysis. The Florida Game and Fresh Water Fish Commission has also completed work in this area and it is anticipated that a combined report can be issued to make an evaluation and comparison of the 1958 Escambia River work.

Major survey work was conducted in the area of Bayou Chico, during the early part of the year and summer. This work reevaluated the conditions of Bayou Chico since the installation of treatment facilities in the majority of the industries located on the Bayou. Some background work was also conducted on the individual waste streams discharging to the Bayou waters.

A complete survey and evaluation of the Chipola River and the City of Marianna was conducted during the spring of 1963. The work dealt primarily with the area of the river above and below Marianna and a rendering plant south of the city. An evaluation of the city's sewage treatment plant operation was also completed at the same time.

Due to local concern and interest in pollution in the Choctawhatchee Bay area, two sewage treatment plant surveys were started during the latter part of the year. These involved the cities of Ft. Walton Beach and Niceville. Both of these facilities discharge to the Bay area in question and reports of the work are currently in the rough draft form.

Over and above routine sampling and analysis of the water quality station in the area; short surveys of Blackwater River and portions of Choctawhatchee Bay were completed. These were of a localized nature and dealt with specific areas.

It should be noted that the carbon filter portion of the U.S. Public Health Service (USPHS) station, located on the Escambia River at Century was taken out of service during the middle of the year. This was caused by repair work being undertaken on the bridge. Chemical and biological sampling was continued.

A major effort was made to provide on-the-job and practical training to operators of sewage treatment plants. Field visits and work in plant laboratories enable the operators to see and do firsthand analysis. This type of work was conducted at Milton, De Funiak Springs, Ft. Walton Beach and Garniers Beach sewage treatment plants, to name just a few. Assistance and instruction was also given at the Region I—Water and Sewage Operators Association meeting in Ft. Walton Beach.

Various miscellaneous items were started and completed during this year and listed below are examples: bacteriological work in Pensacola Bay indicated a definite need for extensive surveys and evaluations of the City of Pensacola's sewage treatment program; routine water analysis of common carrier samples was conducted as well as collection of radiological samples for the monitoring programs; spot checking of small package plants in the area, so far as removal of organic material was also conducted; and complete inventories of all water and sewage treatment facilities was completed.

Jacksonville Regional Staff

In addition to established surveillance in the assigned area, the staff was involved in specific studies throughout the state during the year.

The mobile trailer laboratory was utilized in several surveys in areas beyond reasonable travel time to Jacksonville. This facility was used in surveys of the Fellsmere Farms drainage system in Indian River County; St. Marks River survey, Wakulla County; Southwest Orange County sewage treatment plant; and the Halifax Canal survey in Volusia County.

Besides handling numerous samples submitted by bureau personnel and individuals, the Jacksonville staff was involved in analyzing and often collecting samples for surveys of four sewage treatment plants, two plating wastes investigations, common carrier samples of drinking water, a screening survey of the streams in Duval County and more extensive surveys of Ochlockonee River, Big Pottsburg Creek and the upper part of Cedar Creek.

Biological activities of the staff consisted of 10 biological surveys and participation in numerous conferences, meetings and short courses. Five teaching assignments were performed during the year.

A study of the biological effects of aquatic weed killers was begun in cooperation with the U.S. Department of Agriculture, USPHS, Corps of Engineers and the Bureau of Entomology. One scientific paper was prepared but will not be published until sometime during 1964.

Winter Haven Regional Staff

The problem of fish kills in various streams and lakes received considerable attention. In Orange County, Lake Apopka presented a problem requiring considerable interagency activity and chemical and biological studies have been placed on a continuing basis. The study has already involved consideration of industrial, agricultural and municipal waste sources with no clear-cut determination as to the predominant factor.

Investigations and studies were carried out in various areas relating to problems of citrus waste disposal which has continued over the years to be a source of difficulty.

Increased processing of sugar cane in new plants, as well as those which have expanded their capabilities, has caused considerable concern over the waste disposal practices of this industry. Special surveys were made in connection with alleged pollution of streams to which wastes from sugar mills are discharged. Recommendations were made following analysis of the respective surveys and hopefully suitable waste treatment facilities will be provided.

There were continuing surveys and surveillance of the Peace and Alafia Rivers in connection with the control of pollution from the phosphate mining and processing activities in Polk and Hillsborough Counties. Likewise studies were undertaken or continued relating to other industrial processing wastes which may discharge to these major river basins.

A chemical and biological survey was undertaken in Whitaker Bayou, Sarasota County, and the report published with the findings of the survey. This survey was undertaken to determine the effects of the dis-

charge of treated waste water from the City of Sarasota and followed other unpublished studies undertaken after complaint of odor and aesthetics relating to this stream which flows through some residential and other developed areas.

Numerous cooperative studies were undertaken with the Game and Fresh Water Fish Commission principally of a biological nature but where appropriate chemical analyses were also included.

FINANCIAL AID FOR WASTE TREATMENT CONSTRUCTION

The financial aid provided through Public Law 660 was a continuing impetus to the construction of sewage treatment facilities for municipalities.

FISCAL YEAR 1963-64

Federal allotment for fiscal year 1963-64.....	\$ 2,041,200.00
Unencumbered funds from allotments for previous fiscal years.....	23,040.00
Reallotted funds.....	131,063.00
Total amount available to applications qualifying for a grant for the current fiscal year.....	2,195,303.00
Number of applications received.....	26
(Of these 15 were new applications and 11 were letters from unsuccessful applications of previous fiscal years requesting reconsideration of original applications or new projects)	
Estimated costs of overall projects	28,278,357.00
Federal grants requested.....	3,772,977.00
Per cent of costs for which grants were requested.....	13.4

Assistance provided from this source was made by the USPHS to Boynton Beach, Clearwater, Clewiston, Daytona Beach, Fort Myers, Miramar, New Port Richey, New Smyrna Beach, Port Orange, Valparaiso and Wewahatchka. Favorable consideration is based on readiness to proceed with construction and other specified priority factors.

TABLE 31
ENGINEERING LABORATORIES ANALYSES,
BASIC WATER QUALITY DATA, FLORIDA, 1963

LABORATORY	D.O.	B.O.D.	pH	Solids	Fluorides	C.O.D.	Chlorides	NO ₃ , NO ₂ , NH ₃	Phosphates	Biological	Miscellaneous*
Jacksonville.....	252	362	549	537	56	133	172	127	33	23,160	823
Winter Haven.....	689	1046	1155	631	746	.....	.....	681	507	19,875	2991
Orlando.....	42	.....	5	6	.....	.....	.....	.....	.....	.....	73
Pensacola.....	818	659	716	340	5	411	343	279	38	5,200	1010
Mobile Trailer Lab....	270	604	381	815	.....	37	205	352	78	.....	363
TOTALS.....	2071	2671	2806	2329	807	581	720	1439	651	48,235	5260

*Miscellaneous includes phenols, cyanides, surfactants and other specialized analyses.

DIVISION OF INDUSTRIAL WASTE

VINCENT D. PATTON, M.S.S.E.
Director

The work of the division was devoted primarily to plan review, sampling and technical assistance. During half of the year only one-half of the authorized professional staff were available, resulting in a larger burden being placed on the two staff engineers available. The services of one engineer were available during a portion of the year through loan by the U.S. Public Health Service (USPHS).

The number of industrial waste treatment plants approved during 1963 was the same as 1962. The cost was much lower, although the capacity as reflected by the population equivalent was several times as great as that of the previous year. These are shown in Table 32.

The project in Dade County to serve the Miami International Airport came to fruition during 1963 and plans for the force main were approved by the Division of Waste Water, which will result in industrial waste and domestic sewage being piped to the City of Miami sewage plant rather than being placed in adjacent canals and rivers.

One project approved by this agency was concerned with providing additional treatment for one of the large pulp and paper companies. This is a part of the continuing program of this company aimed at increasing the effectiveness of its treatment.

A considerable amount of time was spent with personnel of various companies in the sugar industry, which are located primarily in Palm Beach County. Some difficulties have been encountered by this industry and work is continuing toward providing satisfactory waste treatment.

The majority of plans approved in the industrial waste field were for laundromats. One additional installation was approved which was proposed to provide regular treatment and, in addition, include the removal of detergents to an acceptable level.

Because of the public interest in a proposed oil refinery which was to be located in the southern part of Dade County, an ordinance was adopted by Metropolitan Dade County on April 23, 1963, to set certain limits in connection with water pollution, as well as air pollution. Although several conferences were held, no plans have been presented to date concerning this proposed refinery. One other large industry has started programming to construct a space age processing plant in the same county. Efforts were directed toward providing better waste treatment in the citrus industry and in this connection meetings were held with the various persons concerned.

AIR POLLUTION

The air pollution control program covers the entire state and includes operation of the Polk-Hillsborough air pollution control district. The Florida Air Pollution Control Commission (FAPCC) during 1963 consisted of the following members: J. O. Bond, M.D.; E. T. Casler, D.Sc.; General D. N. Hauseman; E. R. Hendrickson, Ph.D.; F. L. McNeer; A. P. McIntosh; W. D. Miller; R. E. Parks, M.D.; L. H. Wear; and G. F.

Westbrook, Ph.D. Dr. Hendrickson served as Chairman and Mr. Miller served as vice-chairman. General Hauseman replaced W. R. Fort as an industry representative in March 1963.

The FAPCC held six meetings during the year.

STATEWIDE PROGRAM

Seven surveys were made in various areas of the state by central office personnel; in addition, assistance was rendered to Winter Haven personnel on two others. The surveys were concerned with particulate matter in several cases, "red tide" complaints in Sarasota County and various other types. About the middle of 1963, it was learned that a new power plant was to be constructed by New Smyrna Beach immediately north of the city, and another by one of the utility companies near Cocoa. Since that time, monthly samples for background surface data values have been obtained. It is expected that this type of work will be continued to provide a satisfactory picture of the background atmosphere in the two areas.

Nine stack sampling surveys were made during the year and were concerned mainly with particulate matter. In connection with this, a meeting was held with the Asphalt Institute and a portion of the stack sampling mentioned above was intended to determine existing emission values to permit better evaluation concerning possible changes in the sanitary code covering this matter.

POLK-HILLSBOROUGH AIR POLLUTION CONTROL DISTRICT

The primary responsibility of the control district continued to concern 10 phosphate mining and fertilizer manufacturing companies in Polk and Hillsborough Counties.

During 1963, programs in operation were: conference, conciliation and persuasion; Pensacola Bahia monitoring, ambient air sampling for both fluorides and sulfur dioxide; pasture grass sampling; stack sampling; and inplant inspection.

It will be noted from the list below that there was a large increase in the number of sulfur dioxide samples, as well as of fluoride samples collected in the ambient air.

NUMBER OF AIR POLLUTION SAMPLES ANALYZED BY TYPE, FLORIDA, 1963

Bahia grass (usual monitoring stations)	734
Filter papers	1018
Gladioli	118
Citrus	12
Ambient air, F	1938
Ambient air, SO ₂	4043
Pasture grasses	253
Source sampling	58
Dustfall samples	
Solids	459
Fluorides	201
Phosphates	103
Miscellaneous (soil, water, rain, dust, bones, special vegetation, etc.)	136
Total	9073

During the year, the phosphate industry installed the following air pollution control devices and modifications: 20 wet scrubbers, eight bag filters, and one mist eliminator. The latter was installed on a sulfuric acid plant to reduce the amount of sulfuric acid released to the atmosphere.

The phosphate companies have continued to carry out their own monitoring programs.

Involved in all activities was the handling of 8790 air samples. Almost one-half of these were concerned with sulfur dioxide, with the next largest group of analyses devoted to ambient air fluoride samples, followed by filter paper analyses and dustfall samples.

A total of 33 sets of plans were reviewed and approved during the year which involved air pollution control devices for the phosphate industry.

Personnel of the district worked with other personnel in sampling of asphalt plants, and worked with personnel in county health departments (CHD) on dustfall studies which were intended to provide information concerning the status of air pollution in the areas under consideration.

A considerable portion of district personnel time was required in connection with one plant on the east coast which is engaged in the fertilizer business. As a result of the work expended, there appears to be some improvement in the situation. In May 1963, all phosphate companies were contacted concerning the status of their respective air pollution control programs. A Notice to Abate was forwarded to Armour and Company's Fort Meade plant and a Letter of Intent was forwarded to Armour and Company's Bartow plant, American Cyanamid Company, Davison Chemical Division of W. R. Grace and Company, and Virginia-Carolina Chemical Corporation. A letter requesting that the companies continue action to "button up" emissions by June 1, 1963, was forwarded to the other companies. Subsequently, on May 15, 1963, the court of jurisdiction was petitioned for an injunction against air pollution by Armour, Fort Meade. On July 17, 1963, a continuance was granted by the court which stated that air pollution levels should not increase; consequently, this required the maintenance of a continuing surveillance as a result of the matter being in the hands of the court under this status. Continuing surveillance was still in effect at year's end.

As a result of the letters of notification, considerable further action has been taken by the companies.

On December 16, 1963, a letter was forwarded to the FAPCC indicating that in the opinion of the Board, conference, conciliation and persuasion had failed in the case of Smith-Douglass Company, Inc., and the case was referred to the FAPCC under procedures set forth in Chapter 403, Florida Statutes.

Technical personnel of the district have expended a considerable amount of time in consultation with the FAPCC in work which is intended to provide possible revisions of the commission's rules and regulations with respect to fluorides and sulfur dioxide emissions.

REFUSE DISPOSAL

A total of 80 incinerator projects were reviewed and approved during the year. Authority was delegated to those CHDs having sanitary engineers to approve incinerators having a capacity not exceeding 1000 pounds per hour. A total of 15 projects were approved by four CHDs. Table 33 shows a breakdown of approvals. The total value of incinerator projects approved was more than double that approved in 1962. The increase in cost was due primarily to the large municipal incinerator approved for Clearwater which has a total capacity of 300 tons per day. A similar size unit was approved to serve Broward County in December 1963. The cost of each of these incinerators was estimated at nearly one million dollars. The Broward County incinerator was part of a continuing plan to provide facilities for countywide solid waste disposal in an attempt to alleviate a rather unsatisfactory situation which has existed in the past.

An engineering study was received concerning solid waste disposal in Dade County and has been endorsed by this agency. This plan envisions construction of several incinerators to serve all areas of the county.

DRAINAGE WELLS

There was a slight increase in the number of drainage well permits as compared with 1962. During the year a total of 183 permits were issued, primarily for air-conditioning or swimming pool drainage.

RADIOLOGICAL HEALTH

Work was continued during 1963, in cooperation with the Division of Radiological and Occupational Health and the Bureau of Laboratories, in securing samples for radiological analysis. A total of 524 water samples were collected by bureau personnel during 1963 and forwarded to the Bureau of Laboratories for analysis. These were intended to provide further background information in addition to the data previously obtained.

A large amount of additional data concerning radioactivity in air, rainfall, sewage and surface waters in the vicinity of Gainesville were furnished by personnel of the Phelps Sanitary Engineering Laboratory, University of Florida.

During the year, the intra-agency committee met and it was indicated that as soon as laboratory capabilities permitted the program would be expanded to include additional types of samples, such as oysters, vegetation and others of environmental nature.

TABLE 32
INDUSTRIAL WASTE PROJECTS APPROVED WITH
POPULATION EQUIVALENCE AND COST,
BY COUNTY, FLORIDA, 1963

County	Number Approved	Population Equivalent	Cost
Alachua	2	299	20,000
Brevard	1	122	5,000
Broward	2	519	3,450
Calhoun	1	112,000	66,000
Citrus	1	109	3,500
Clay	1	152	2,999
Collier	1	120	5,000
Dade	7	31,512	76,500
Duval	2	1,245	11,000
Escambia	1	350,000	81,100
Hardy	1	70	2,000
Hillborough	1	106	5,000
Highlands	2	112	10,000
Hillsborough	1	37,300	25,000
Indian River	1	148	6,500
Lake	1	143	12,000
Lee	2	527	16,500
Manatee	3	423	15,000
Orange	1	54,200	25,000
Palm Beach	5	3,681	53,000
Pinellas	1	14,400	312,180
Polk	1	280	25,000
Santa Rosa	8	817	179,900
Sarasota	1	1,240	30,000
Seminole	1	8,100	12,800
St. Johns	1	118	7,000
Volusia			
Total	51	617,743	1,011,429

TABLE 33
INCINERATOR PROJECTS APPROVED WITH
POPULATION EQUIVALENCE AND COST,
BY COUNTY, FLORIDA, 1963

County	Number Approved	Population Equivalent	Cost
Alachua	3	345	\$ 7,325
Bradford	2	430	6,500
Brevard	5	1,750	16,000
Broward	3	50,135	1,967,000
Charlotte	1	75	2,350
Dade	5	2,694	76,100
DeSoto	2	400	4,704
Duval	7	2,130	39,400
Escambia	2	800	11,500
Hillborough	13	3,645	48,375
Jackson	1	60	1,500
Lake	1	300	3,400
Manatee	2	900	14,600
Marion	2	500	18,600
Martin	1	185	2,805
Monroe	1	150	5,500
Okaloosa	1	50	1,800
Orange	1	200	15,000
Palm Beach	7	1,625	34,300
Pinellas	13	604,365	937,600
Polk	2	600	7,000
St. Johns	1	150	5,000
St. Lucie	1	300	3,400
Sarasota	1	330	4,800
Seminole	1	300	3,200
Volusia	1	75	1,500
Total	80	672,494	\$3,239,259

DIVISION OF SPECIAL SERVICES

CHARLES E. COOK, C. E.
Director

The general functions and responsibilities of the division include administrative procedures for the control of statewide production of marketed shellfish and crustacea products, with direct supervision over production of these products in the Apalachicola area; direct and statewide supervision on the manufacture, renovation and sale of all items of bedding in the enforcement of the bedding law; review of subdivision analyses with recommendations for adequate public health utilities or individual sanitary facilities; liaison with and service to the federal mortgage insuring agencies on community development and individual home construction; interpretation and technical assistance on the plumbing regulations of the State Sanitary Code and on regulations for individual sewage disposal of the sanitary code.

Duties and functions in the control of the quality and safety of shellfish produced, and in the subdivision program for attainment of satisfactory environment in the urbanization and community growth throughout the state are closely interrelated with the programs and responsibilities of various CHDs. Much credit is due to many of the CHDs for increased interest, active procedures and implementation of personnel devoted to these two programs during the year, which resulted in more adequate and efficient controls.

BEDDING LAW ADMINISTRATION

The Bedding Inspection Law, Chapter 556 Florida Statutes, charges the State Board of Health (SBH) with the administration and enforcement of the provisions of the law and the regulations of the State Sanitary Code as adopted therefrom. Principal requirements are the accurate and meaningful labeling of all filling material used in bedding and all items of bedding manufactured or renovated and all items sold or offered for sale; the registration of all classifications of the bedding industry and the use of inspection stamps sold by the SBH.

Activities devoted to this responsibility were more or less routine with no new activities incurred during the year. It is indicated that fairly adequate and efficient inspections were provided throughout the state for maintaining reasonable control of the manufacture, renovation and sale of items of bedding and processed filling materials used therein. Although the actual number of field inspections made and number of items found in violation remained approximately the same as during the previous year, a considerably greater number of items were restricted from sale. This indicates a more firm action in preventing mislabeled items, and items otherwise in violation, from reaching the public.

There was a total of 6013 establishments of the industry registered during the year. These included 947 manufacturers, both in state and out of state, 453 renovators and 4613 retail establishments within the state.

Revenue collected from stipulated fees for required registrations of establishments and sale of inspection stamps totaled \$109,790 which is a decrease of \$625 from the previous year. This sum includes \$51,270 for registry fees and \$58,520 for inspection stamps.

There were 7852 individual inspections of various establishments made by the five regional field inspectors, with 39,821 items of bedding found to be in violation with the law to varying degrees. As heretofore, the majority of the total violations was due to failure of affixing the required inspection stamp on the label attached to each item. There was a total of 2770 pieces of bedding placed off sale until properly corrected for minor violations or returned to the manufacturer for major violations.

Increased use and value of the service obtained from the laboratory and the chemist were available. There was a total of 2017 analyses, or physical chemical tests, made on 450 samples during the year.

New rules and regulations, as adopted on July 1, 1962, were available and widely distributed early this year. These regulations were favorably received and observed by the industry and resulted in better uniformity of practices and enforcement.

Personnel assigned to this program remained the same. This included part-time administration by the division director, one full-time field supervisor, five regional field inspectors, one chemist, one secretary and clerical assistants.

A revision to the law was introduced in the Legislature, sponsored by the Florida Retail Furniture Dealers Association, to eliminate the use of bedding inspection stamps and to double the registration fees but failed to pass. The introduction of a comparable revision to the present law by the SBH at the next legislative session is recommended. The difficulties encountered in affixing the stamps to prepackaged items destined for interstate distribution causes a high nuisance and economic effect on the industry.

SUBDIVISION PLANNING

This program is directed toward preventing and discouraging the wide and indiscriminate use of private wells and septic tank systems in the rapidly expanding land developments throughout the state. The individual use of wells and septic tanks has created critical problems in urban areas often endangering public health and rarely providing a permanent solution to the need of obtaining water and disposing of domestic waste. The program, therefore, is an effort to restrict these individual systems to isolated properties or small subdivisions where the population density will be strictly limited. Initial provision for community water or sewerage systems, designed for area wide expansion, are recommended and encouraged. The policy of the program is that whenever feasible connection should be made to a public water supply and sewage disposal system.

Activities consist of reviewing analyses data on subdivisions, mass housing and community projects as submitted by the CHDs and making these recommendations for adequate public health utilities. These rec-

ommendations and related consultation services are provided to the CHDs, developers, land owners and consulting engineers and provide liaison with the Federal Housing Administration (FHA) and the Veterans Administration (VA). This program is severely handicapped in that no state legislation exists specifically establishing area land planning or for mandatory public health utilities in newly created subdivisions; however, the activities of the program have resulted in the voluntary construction of such utilities in many subdivisions and housing developments in keeping with the needs of urbanization growth.

The program is intended to serve as a guide and planning policy for the CHDs. Many of these now assume the responsibility for approval or disapproval of individual facilities to be used with new homes. Technical advice supporting the need of area utilities for assurance of a satisfactory level of environmental sanitation is furnished and emphasized. CHDs, in general, agree with, and support, the policy and recommendations of the program and promote area utilities.

The number of subdivisions reviewed and processed, as received from various CHDs, totaled 55 and contained 2200 lots or home building sites. This was approximately twice the number of the previous year. Area sewerage or extension to existing sewer systems was recommended to serve 677 of these lots, with temporary septic tank systems accepted as satisfactory pending accessibility of sewers for the remaining 968 lots. Central or municipal water supply service was recommended for all but 22 of these homesites, on which private wells were acceptable. These subdivisions received do not reflect the many new developments which now voluntarily include proper planning for initial installation of adequate public health services due to knowledge of SBH policy requirements for approval. Copies of these data and recommendations were transmitted to the federal insuring agencies and were influential in determining those agencies' requirements for participation in the subdivision development.

Close liaison with, and a service relationship, is rendered the FHA and the VA in the review and approval of final inspection reports on individual home building where septic tank system and/or individual water supply system is used. Normally, these apply to widely scattered and individually owned homes constructed in rural or strictly urban areas where public utilities are not available. Review of 469 cases were made for VA and 51 for FHA. All of these involved septic tanks; however, only 193 included a private well on the same site. In all cases compliance with minimum standards of the State Sanitary Code and with FHA's minimum property standards were required for approval. All individual water supply systems were required to comply with minimum bacteriological and chemical standards for an approved water supply.

SHELLFISH AND CRUSTACEA CONTROL

The prevention of unsafe or contaminated shellfish from being harvested and marketed by prior approval of growing waters and through sanitary controls on processing is a major activity. Shellfish have an unusual ability to transmit disease and the program has been developed for the purpose of assuring that shellfish sold, or offered for sale, will have

been harvested from approved water growing areas, processed, packaged and distributed under satisfactory sanitary conditions and will be safe to eat. It is important that the program be effective and realistic and there is a need for continued updating of standards with adequate implementation of personnel to provide the desired level of public health protection. The program necessitates cooperation between the U.S. Public Health Service (USPHS), SBH, State Board of Conservation (SBC), CHDs, and the industry with specific delegated responsibilities.

The SBH reviews sanitary surveys and bacteriological data collected and furnished by the CHDs and approves for harvesting water areas of acceptable quality; issues certification and permits to producers upon favorable recommendations from the CHDs and supervises the sanitation procedures in all shellfish establishments in the Apalachicola Bay area.

Following several conferences, an agreement was drawn up and signed by the State Health Officer and Director of the SBC which defined areas of responsibility and agency activities therewith. Under this agreement the SBC now patrols and prevents the harvesting of shellfish from water areas not approved by the SBH. The agreement further resulted in better understanding and closer liaison between the two agencies.

The association of a previously unknown neurotoxin with shellfish occurred in several southwestern Gulf Coast counties. The area was closed for several weeks for protection of consumers. A monitoring program was established with 443 samples submitted to the Bureau of Laboratories to ascertain the presence or absence of the toxin. There were several local cases of illness attributed to the toxin from consuming the shellfish. The USPHS began, and is continuing, research and investigation for identification of the causative agent.

Major activities again this year were devoted to surveys of potential shellfish growing areas. New areas along the coastline were approved for commercial harvesting and some of the existing approved areas were rechecked in compliance with the requirements of the USPHS Interstate Certification Program. Portions of the estuarine waters of Duval, St. Johns, Brevard, Indian River, St. Lucie, Collier, Charlotte, Sarasota, Hillsborough and Pinellas Counties were approved for commercial harvesting of shellfish. Resurveys were conducted in Lee, Hillsborough, Pinellas, Citrus, Dixie and Bay Counties to update the original surveys.

All shellfish processing houses were routinely visited for sanitation inspection of their procedures and operations. The annual evaluation by the USPHS demonstrated that the state's control program and the shellfish industry complies satisfactorily with the minimum requirements.

Increases in the production and interest in the shellfish industry are reflected in the construction of new processing houses. This also increases the workload on CHD and state personnel to provide the necessary supervision.

Crabmeat production increased over the previous year but demands for this product have not reached the proportions of shellfish products. Thirty-eight processing establishments were permitted this year as compared to 33 during the same period last year.

Table 34 summarizes the pertinent items of the activities in the program. The detailed activities of the CHDs are not reflected in the table.

TABLE 34
SUMMARY OF ACTIVITIES—SHELLFISH
AND CRUSTACEA PLANTS, FLORIDA, 1963

Type of Operation	Operating Certificates Issued	State Visitations Made	New Plants Constructed	Plants Remodeled
Oyster shucking and packing.....	118	242	17	7
Oyster shellstock only.....	57	15	23	
Oyster repacking.....	12	24		
Scallop shucking and packing.....	27	3	1	
Clam shucking and packing.....	18			
Crabmeat processing.....	38	34		
Oyster reshipper.....	4		4	

RELATED SHELLFISH AND CRUSTACEA ACTIVITIES	
Oyster growing water samples bacteriologically tested.....	7150
Oyster meat samples bacteriologically tested.....	109
Crabmeat samples bacteriologically tested.....	140
Plant water samples bacteriologically tested.....	362
Number of new water areas approved for shellfish harvesting.....	11

TECHNICAL ASSISTANCE

The regulations of the State Sanitary Code for individual sewage disposal were rescinded by the Board and are under revision study. Assistance was given to the State Department of Education in planning a survey of schools to determine water use and sewage flows. Interpretation and application of the plumbing regulations, school sanitation regulations and septic tank requirements were handled. Assistance was given to the bedding industry association in preparing a proposed revision to the bedding law. National uniform definitions and terminology for filling materials used in bedding were prepared for adoption by all states having a bedding law.

DIVISION OF WASTE WATER

RALPH H. BAKER, JR., M.S.S.E.
Director

This division's responsibilities and activities in 1963 continued to be centered around plan review for domestic waste facilities. The present staff of the division consists of five engineers, two stenographers, one secretary and a director. Of these, three engineering positions were filled and one replacement was made during 1963.

MUNICIPAL WASTES

A total of 820 projects were processed and approved as compared to 772 projects in 1962.

The total construction dollar volume of all projects reflected a decrease of approximately \$4,000,000 over the previous year. It will be noted that the decrease was in lift stations and collection systems, while there was an approximate increase of \$2,000,000 in sewage treatment plant construction (Refer to Table 35). This is also reflected in Figure 3, in that there was an increase of 12 sewage treatment plants approved this year over last year.

A number of incorporated municipalities provided new treatment facilities or major improvements to existing facilities during the year. Eighteen municipal systems were under construction. They were: Bartow, Boynton Beach, Clearwater, Cocoa Beach, Clewiston, Cottondale, Daytona Beach, Eau Gallie, Ft. Myers, Lantana, Melbourne, Miramar, New Port Richey, New Smyrna Beach, Port Orange, Pompano Beach, Rockledge and Valparaiso. Twelve municipalities — Belleview, DeLand, Delray Beach, Hallandale, Inverness, Maitland, Mount Dora, Ormond Beach, St. Augustine, St. Cloud, Sanford and Wewahatchka — completed construction during 1963. Six municipalities — Blountstown, Crystal River, Edgewater, Mary Esther, Lake Butler and Long Key Sewer District — had plans approved but construction was not started. This does not reflect the vast amount of privately owned treatment facilities constructed during the year to serve subdivisions.

A total of 32 preliminary engineering reports covering proposed sewerage projects were reviewed and commented on during the year. The workload imposed by these preliminary reports is quite significant when the amount of time spent in meetings and consultations with the individual consulting engineers, in addition to the actual review, is taken into consideration. Public awareness with regard to pollution is becoming more evident and numerous complaints have been received pertaining to plant odors and improperly treated sewage.

During the past year, visits were made to the plants almost entirely for emergency situations based on complaints received. Field investigations have been conducted on a cooperative basis with the regional and county sanitary engineers. Two extensive field investigations were completed by members of the division in conjunction with the regional engineer and the Division of Radiological and Occupational Health, one dealing with the sanitary conditions at Edgewood Heights, Duval County, and the other from complaints received on Robinette Subdivision, Clay County.

Sixteen incorporated municipalities at the present time, are discharging untreated waste to receiving streams. These are: Cedar Keys, Crescent City, Crystal River, Dunnellon, Everglades, Florida City, Green Cove Springs, Hastings, Jacksonville, LaBelle, Lake Butler, Penney Farms, Sebring, Sebastian, White Springs and Waldo. Of these, two, Crystal River and Lake Butler, are in the process of starting construction during 1964. Recent preliminary planning of sewage works has been accomplished by Dunnellon, Everglades, Sebring and LaBelle of the remaining 14 municipalities.

Four hundred forty-eight treatment plants out of a total of 1152 are routinely submitting monthly operating reports. This amounted to ap-

proximately 3800 sewage treatment plant reports which were received by this division for review, comments and acknowledgment during the past year.

Again a request was received from the Committee on Sewage and Waste Disposal of the Conference of State Sanitary Engineers for a list of current municipal waste treatment needs in the state. Also received was a request from Senator Pat McNamara, Chairman of the Senate Public Works Committee, for a survey of needs through 1970. A review of the information secured from these surveys emphasized the amount of work yet to be done in the state to provide adequate and proper waste treatment facilities. These surveys showed that sewage treatment works to serve 1,500,000 persons in unincorporated areas of more than 1000 people and incorporated cities were required. As expected, the needs were particularly obvious in the most densely populated counties. It is also interesting to note that in terms of number of facilities the greatest need exists in the small communities of less than 1000 people. Several small municipalities and two additional municipalities of over 25,000 persons were added to the list this year as needing facilities to serve present built-up areas, bringing the total to eight municipalities of over 25,000 persons and serving approximately 1,000,000 people. It should be noted that Table 37, when compared to the 1962 figure, reflects an increase of approximately 40,000 persons. This is accounted for by the addition of the two municipalities with populations of over 25,000 persons. These additions more than offset the reduction in the number of municipalities with needs, when compared to the 1962 figure.

Florida, as reflected in the 1960 census, is 73.9 per cent urbanized versus 26.1 per cent rural. The rural population still contains approximately 1,300,000 persons who continue to be served by temporary means of sewage disposal, such as septic tanks. It is also interesting to note that 111 incorporated municipalities with populations greater than 500 have no central treatment facilities and therefore must be assumed to be served by septic tanks. This amounts to 270,000 persons. It should be noted that the major contributor in this classification is the City of Hialeah, which accounts for 66,972 persons as of the 1960 census and therefore could not technically be considered as a rural population. This picture is gradually changing as the percentage of the population changes from rural to urban and the people in the densely populated fringe areas surrounding Florida's larger cities are annexed. As reflected in the 1960 census, during the 10 year period, 480,000 persons have been annexed to incorporated areas. This population has a higher probability of being served by sewers as the incorporated municipalities extend their sewer systems.

During 1960, in the process of preparing an inventory of existing treatment facilities for publication, a survey of municipal and subdivision sewage treatment plants was made in order to determine current addresses of the private utility companies, as well as the number of connections to their existing systems. With this information, a preliminary inventory with the addresses of the utility owners, as well as the plant design capacity, location and the point of effluent discharge was prepared and sent to field

personnel for verification. The majority of these reports have been returned.

EDUCATION

Members of the staff cooperated with the Division of Water Supply and others in program scheduling, provision of instruction and examination preparation and administration for eight regional short schools and one annual short school for water and sewage operators. These short schools were attended by over 1000 operators with 202 taking the examinations and 91 successfully completing these examinations. To date, there have been 54 Class 'A' certificates given; 118 Class 'B' certificates and 576 Class 'C' certificates to sewage operators. Class C examination requires experience equivalent to four years work (including one year of actual plant operation); Class B — experience equivalent to eight years work (including two years of actual plant operation); and Class A — experience equivalent to eight years work plus four years of actual plant operation. Experience equivalency varies according to educational backgrounds.

From a survey of operators, the major comment made by the operators was that they requested more inspections of their plants and facilities by personnel of this division.

TABLE 35
NUMBER OF SEWAGE PROJECTS APPROVED WITH
DESIGN POPULATION AND ESTIMATED COST BY
COUNTY, FLORIDA, 1963

County	No. of Projects	Design Population	ESTIMATED COSTS			
			Sewers	Lift Station	Plant	Total
Alachua.....	8	2,889	274,740	6,500	85,900	317,140
Bay.....	1	40	2,000		6,000	8,000
Bradford.....	2	500		14,000		14,000
Brevard.....	121	67,442	3,290,981	571,964	385,950	4,248,895
Broward.....	53	148,945	1,579,588	549,938	1,041,500	3,171,026
Calhoun.....	3	2,050	11,275	6,200	96,725	114,200
Charlotte.....	6	143	24,500	1,000	11,500	37,000
Citrus.....	4	2,040	242,000	78,100	78,700	398,800
Clay.....	5	344	22,400	4,000	10,540	36,940
Collier.....	9	16,337	1,002,100	131,600	50,434	1,184,134
Dade.....	90	125,186	9,139,478	2,751,274	2,557,000	14,447,752
DeSoto.....	1	295	19,700	10,800		30,500
Duval.....	110	14,720	1,124,718	154,727	385,560	1,665,005
Escambia.....	18	4,381	381,506	27,900	70,000	479,406
Franklin.....	1	427	35,000	10,000	15,000	60,000
Glades.....	1	140	3,800	3,500	11,700	19,000
Gulf.....	1	1,800	23,000	4,100	17,500	44,600
Hendry.....	2	3,800	170,800	56,200	110,000	337,000
Hernando.....	2	175	12,200			12,200
Hillsborough.....	38	333,292	4,308,086	588,179	57,900	4,954,115
Indian River.....	4	140	2,124	12,113	4,000	18,237
Jackson.....	1	1,500		7,000	63,000	70,000
Lake.....	11	6,061	479,100	13,700	55,000	547,800
Lee.....	14	42,480	420,915	53,115	687,000	1,161,030
Leon.....	1	198	2,000		10,000	12,000
Levy.....	1	30			3,800	3,800
Manatee.....	16	2,800	244,283	13,000	77,500	344,783
Marion.....	3	394	20,500		28,800	49,300
Martin.....	7	421	28,600	4,000	27,500	60,100
Monroe.....	3	450	49,230	1,550	25,500	76,280
Nassau.....	1	30			3,500	3,500
Okaloosa.....	4	1,883	366,565	107,997	220,459	695,021
Okeechobee.....	1	500		14,000	16,000	30,000
Orange.....	45	18,175	1,101,502	316,600	107,600	1,525,702
Osceola.....	4	654	2,500	15,500	25,300	43,300
Palm Beach.....	49	43,784	3,267,351	744,400	944,300	4,956,051
Pasco.....	3	7,746	780,000	262,450	307,000	1,349,450
Pinellas.....	88	69,869	2,418,048	454,761	833,717	3,706,526
Polk.....	13	45,837	611,347	154,000	456,000	1,221,347
Putnam.....	1	920	120,000	30,000		150,000
St. Johns.....	4	33	3,250	50,400	6,000	59,650
St. Lucie.....	5	74	59,807	10,500	3,500	73,807
Santa Rosa.....	2	86	8,000		5,000	13,000
Sarasota.....	25	11,458	433,207	32,500	40,300	506,007
Seminole.....	2	98	27,500	6,000		33,500
Sumter.....	3	1,696	64,287	14,000	112,687	190,974
Union.....	1	1,550	65,000			65,000
Volusia.....	32	218,880	3,243,501	668,286	3,540,792	7,452,579
TOTALS.....	820		35,486,439	7,955,854	12,546,164	55,998,457

TABLE 36
SEWAGE TREATMENT PLANT BY TYPES AND CAPACITY,
FLORIDA, 1963

Type of Sewage Treatment Plant	CAPACITY				Total
	Less Than 50,000 GPD	50,000 To 500,000 GPD	500,000 To 1,000,000 GPD	Over 1,000,000 GPD	
Activated sludge	3	24	10	20	57
Contact stabilization....	30	28	3	2	63
Extended air.....	489	40	0	0	529
Trickling filter.....	92	212	39	49	392
Primary.....	24	44	12	25	105
Ocean outfalls.....	0	.....	1	5	6
Totals.....	638	348	65	101	1152

TABLE 37
INCORPORATED MUNICIPALITIES NEEDING WASTE
TREATMENT FACILITIES, BY POPULATION
CLASSIFICATION, FLORIDA, 1963

Population Classification	Number of Municipalities	Population Involved
500— 999.....	54	38,194
1,000— 1,499.....	27	32,379
1,500— 1,999.....	17	30,143
2,000— 2,999.....	17	42,709
3,000— 4,999.....	13	52,310
5,000— 9,999.....	14	107,335
10,000—24,999.....	3	43,806
25,000 and over.....	8	948,549
Total.....	153	1,295,425

TABLE 38
POPULATION OF UNINCORPORATED UNSEWERED URBAN
AREAS OF MORE THAN 1000 PERSONS (PER 1960 U.S.
CENSUS), FLORIDA, 1963

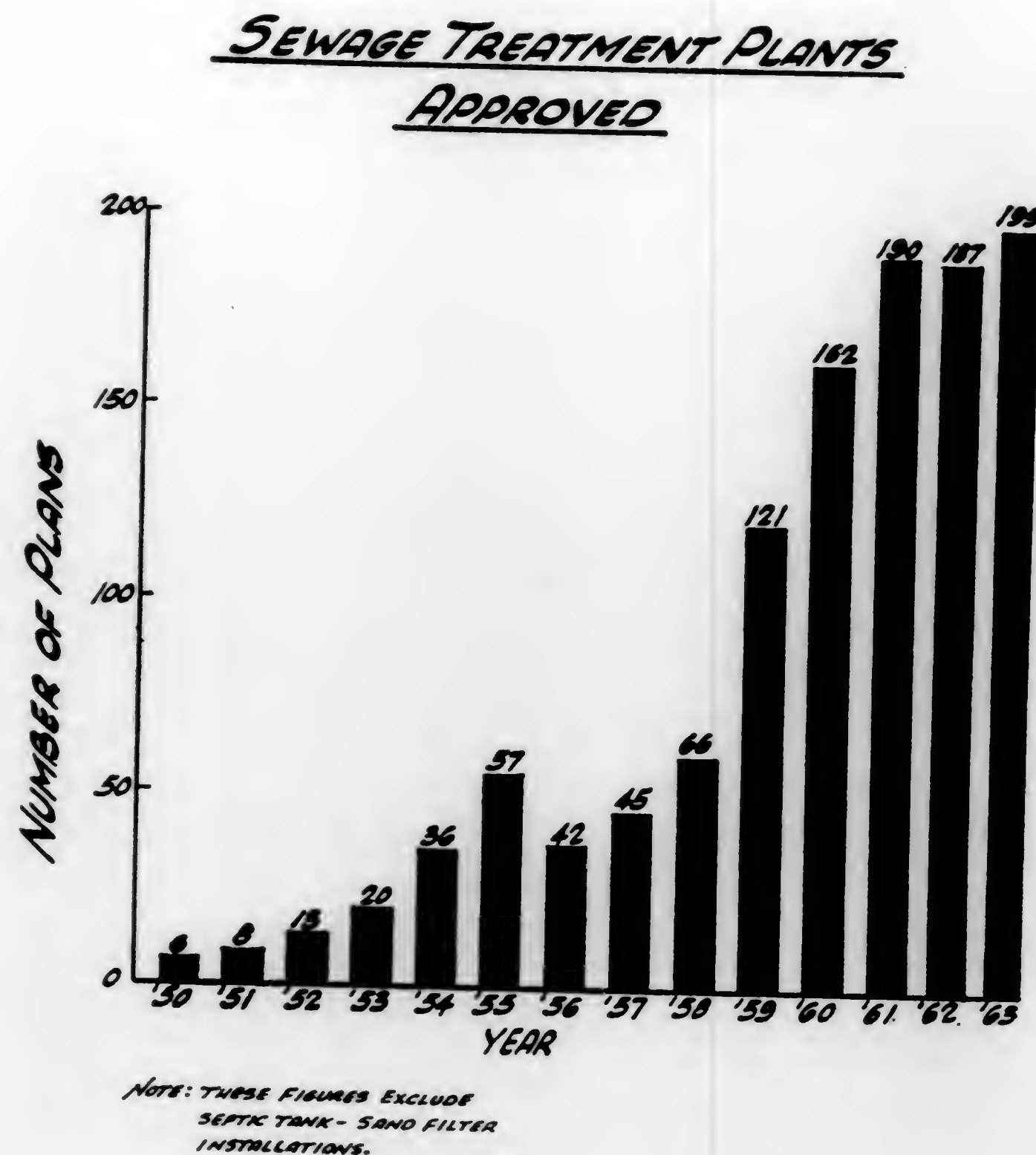
County	Population	County	Population
Bay.....	2,669	Leon.....	1,148
Brevard.....	10,320	Manatee.....	19,577
Charlotte.....	4,286	Marion.....	3,124
Collier.....	3,224	Orange.....	3,698
Columbia.....	2,109	Palm Beach.....	3,516
Dade.....	20,084	Pasco.....	1,523
Escambia.....	61,550	Polk.....	21,474
Hendry.....	1,256	Sarasota.....	22,505
Hillsborough.....	5,032	Seminole.....	1,897
Indian River.....	3,509	Volusia.....	9,579
Lake.....	1,214		
Lee.....	6,840	Total.....	210,134

TABLE 39
NUMBER AND ESTIMATED COST OF WASTE WATER
PROJECTS PROCESSED LOCALLY BY AREA, FLORIDA, 1963

Area	Number	Estimated Cost
REGIONS		
West.....	11	\$ 21,500
Northwest.....	15	27,800
Northeast.....	117	200,000
Central.....	15	55,100
Southwest.....	N/R	N/R
Southeast.....	12	46,500
COUNTIES		
Brevard.....	N/R	N/R
Broward.....	13	26,000
Dade.....	17	136,308
Hillsborough.....	7	23,400
Orange.....	5	10,500
Palm Beach.....	N/R	N/R
Pinellas.....	69	230,970
Polk.....	17	40,200

N/R—Not Reported.

FIGURE 3



DIVISION OF WATER SUPPLY

JOHN B. MILLER, B.S., M.P.H.
Director

Field work, with emphasis on needed surveillance of public water supply facilities producing and distributing water for drinking and household purposes to the citizenry of the state, could be given only minor attention except in counties having engineers in their county health departments (CHD), because of lack of personnel in this division.

Following field sampling of a number of private or individual supply wells in Taylor County (and a few samples from adjacent Fenholloway River) by local and regional personnel toward end of the previous year, an interim progress report was prepared. This activity was coordinated with the Division of Industrial Waste and the analytical work performed through engineering laboratory services. Complaints about taste and odor in the individual water supplies had been received by Taylor CHD and the central office from citizens residing in an area adjacent to Fenholloway River where mill wastes of Buckeye Cellulose Corporation are discharged. The data obtained provided good background information; however, definite conclusions could not be reached through this interim survey, and further investigation of the situation was indicated. In December additional complaints were received from citizens residing on opposite sides of the stream from the general area where wells had been sampled previously. New complainants' wells showed relatively heavy bacteriological contamination. It is planned to continue this well and stream study.

In the latter months of the year, a review of bacteriological laboratory work as performed in water plants was arranged. This was through the cooperation of Bureau of Laboratories, as the actual survey of facilities and procedures involved with both the fermentation tube and membrane filter techniques has been conducted by their chief sanitary bacteriologist. The first water plants to be reviewed are those serving as sources of supply for carriers in interstate commerce; and by the year's end most of the water plants in this category had been covered, with findings generally satisfactory; and recommendations for any discrepancies noted were submitted to plant management for correction.

To supplement information on chemical characteristics of water in public supplies in the state, with particular reference to sodium content, agreement was made to participate in nationwide survey being undertaken over a two-year period by the U.S. Public Health Service (USPHS). Commencing in last quarter of the year, samples are being collected quarterly from representative public supplies (about 90) by regional personnel and sodium determinations done by Bureau of Laboratories. About 10 per cent of the number of samples are sent directly to USPHS.

Limited studies were continued to develop background information about concentration of insecticide, pesticide or herbicide materials in water supplies in the state, particularly where agricultural operations may be significant from this standpoint. Laboratory work in this activity is

done by the USPHS (Pesticide Pollution Studies, Water Supply and Pollution Control). Apparently, the toxicology of minute traces of these materials continues to be unknown. Some 50 samples were collected for Carbon Choloform Extract (CCE) examination from supply sources in three principal areas. Thirty-six per cent of the total number had traces of insecticides reported. Of the 20 samples from one area, 14 or 70 per cent of them showed traces of insecticide; and all 20 samples there showed CCE results in excess of recommended upper limit in drinking water standards. Six of these 14 samples were collected from relatively shallow wells, three from surface sources and five of them were from water plant effluent. In another area 21 samples were collected, and three samples or about 14 per cent of the number showed traces of insecticide and most of them showed excessive concentrations of CCE materials. All but three of these 21 samples were taken from surface sources, among which were those having insecticide traces. At one community in citrus-growing area, a representative number of the deep-seated supply wells were sampled and all showed CCE results well under the upper limit of drinking water standards, and no traces of insecticide were reported on these deep-well samples. In the results obtained regarding the other two areas, there seems to be a semblance of seasonal trend in insecticide traces present, and continued study may possibly further emphasize this.

A little over 900 water supply projects and swimming pools were cleared for construction to serve the public through approval of their engineering plans and project documents. This total number includes the (minimum 20 per cent sample) plans for pool projects reviewed for consistency of program which were approved locally according to arrangement with those counties having engineers in CHDs. This represents a 13.5 per cent increase over the total number of pool and water supply projects for which plans were approved in the previous year.

Considerable effort was expended in the latter part of the year by field engineers of the division in obtaining water works inventory data. This will be very helpful in assessing the overall problem of routine water plant operation surveillance.

CONSTRUCTION OF PUBLIC WATER WORKS AND SYSTEMS

At the end of 1962, 77 water works projects were pending final action in the division. Incoming plans, together with those pending, totaled 847 for this year. In addition to the 661 given formal approval, there were 55 revisions approved, 41 filed for information or "as-built" records, 27 returned to consulting engineers involved; and there were 63 projects carried forward to 1964 for completion of handling.

On the basis of consulting engineers' estimates, the total volume of construction costs of projects for which plans were approved was 70.5 per cent more than for the previous year. Table 40 shows this dollar volume as well as the total number of approved projects, which number is also higher (14.1 per cent) than in 1962. The larger estimated cost total may reflect a greater proportion of funds devoted to plant or source of supply in relation to water projects for extension of existing or for new distribu-

tion systems. About 150 per cent more funds, on the basis of engineers' cost estimates, were devoted to plant or supply increase than was the case for the previous year. Also, the rated capability for water production in terms of million gallons per day (MGD) as represented by the approved plans is shown in Table 40 for each such project. The total increase in rated capability in MGD is 78 per cent more than for the previous year.

Although not as great a proportion as for the previous year (54 per cent), review of the data on proposed construction of public water supply facilities shows many (48 per cent) for areas generally outside corporate limits of municipalities in realty subdivisions. These included 30 plant expansions, 67 new water systems and a total of 223 extensions to existing subdivision systems. New plant or "supply" included in the approved plans when built will total about 30 MGD rated capability. Of this, about 12 MGD involves existing plants and the remainder represents plant capability of the new systems.

The water supply projects proposed for construction by municipalities included a total increase in rated plant capability of some 113 MGD. About 109 MGD is in planned expansion of existing plants. The remainder (3.760 MGD rating) of the water production capability reflects new water supplies proposed for Altamonte Springs, Archer, Esto, Grand Ridge, South Flomation, Wahneta and the State Correctional Institute in Sumter County. Plans approved for municipal water improvements included 288 system extensions.

WATER SUPPLY WELL CONSTRUCTION

Almost the same number of well permits were issued during this year as in the previous year; but, as seen in Table 41, there were 47 counties in which the wells were located, this being 17.5 per cent increase in number of counties involved in the well permit program. Although somewhat more widespread in terms of concentration of permits issued in a minor number of counties (50 per cent of total number of permits issued in only 19.1 per cent of number of counties active), this percentage of permits issued took place in only slightly fewer number (17.5 per cent in 1962) of the active counties in the previous year.

OPERATION OF PUBLIC WATER WORKS

Only a limited amount of field work on sanitary supervision of public water supply systems, in relation to the total problem as far as known, was performed. Not that accomplishment of the previous year in this regard is a proper criterion, but in comparison only 48.7 per cent of the number of plants were visited and 46.0 per cent of the total number of visits were made in 1963. Table 42 shows numbers of water plants visited and the numbers of visits made, and the locations by county where this was done, correlated with the numbers of existing water plants (on the basis of 1959 data which needs to be updated). This field work was done in only 48 per cent of the counties in the state. As was the case in the previous year, by far the majority (76.3 per cent) of the plants visited were those in counties where the CHDs do not have engineers; and, similarly,

the percentage of the total number of visits was in the same range (78.2 per cent) regarding plants in such counties. As would be expected, the remaining number of water plant visits were in counties having their own engineers in CHDs in conjunction with operation problems involving special investigation and consultation with the water utilities people and engineers of the local departments.

The program of in-service training for water works operators (as well as for sewage works operators) under joint sponsorship of the division and others, carried out under University of Florida and in regional areas or districts over the state, continued to be given as much effort as possible. Addition of a new regional short course in southwestern Florida resulted in total of eight held over the state in the year. The data in Table 43 shows, as much as figures can depict, the results of the in-service training. Numerical data comparison with those of the previous year will show 48 per cent more water works operators of all classes successfully completed examinations among those taking them. This trend is continuing: 43 per cent and 35 per cent, respectively for 1962 and 1961, more than for each prior year were successful in examinations. Also, a 29 per cent greater total number of water works operators were certified in all classes, than in the previous year. These observations seem to lend justification to the prerequisite correspondence or home study work now stipulated in preparation for operator certification examinations.

Relative to water works operator training, the division had one engineer receive instructions in the radiological monitoring instructors' course of one-week duration, which is sponsored by Florida Civil Defense Department and the courses given through Florida Institute of Continuing University Studies (FICUS). This is expected to be helpful in getting water works people qualified for continued surveillance and emergency examination of water supplies as to radioactivity.

FLUORIDATION OF PUBLIC WATER SUPPLIES

Although local opposition has been encountered from time to time, the program for water fluoridation continues to move forward. It had been contested in court at Fort Pierce, but litigation was completed and the process actually started in the public supply there on June 3, 1963. Commencing fluoridation at Palatka continued to be postponed because of alteration and expansion of the water plant. (For further information, see Bureau of Dental Health elsewhere in this Report).

PUBLIC SWIMMING POOLS

The previous year closed with 20 pool projects pending final processing; and these together with incoming plans during this year totaled 251 pool projects handled by the division, exclusive of the "sample" number of pool plans approved by CHD engineers reviewed for program consistency. Of these engineering plans and related documents, 201 were given formal approval, 24 revisions were approved, five were filed as information or "as-built" records, seven were returned to the consulting engineers for the respective projects, and 14 pool project plans were carried over into 1964 for final handling.

Among other things, Table 41 shows data on swimming pool construction proposed, tabulated by county, including, of course, those for the counties having engineers who approve pool plans locally. The volume in terms of consulting engineers' estimated costs is lower than for the previous year, but as to number of pools the total is higher (19.2 per cent) than for 1962. These pools have water recirculation, filtration and chlorination facilities; and the average cost (\$10,230) on basis of engineers' estimates is noticeably lower than the trend of past several years for the state as a whole.

After a public swimming pool is constructed and equipment properly adjusted under technical supervision of field engineers of the division, an operation permit is issued; and the pool becomes an item for sanitary surveillance in the CHD concerned. Assistance with technical problems is given by the engineers as may be required. As seen in Table 41 a large number of permits for pool operation were issued, somewhat more (15.7 per cent) than the volume of the previous year. Table 41 also shows the total number of pools continued under valid permit, and at the end of year this number had increased (12.1 per cent over 1962) to approach a total of 2900 permitted public pools in the state. Assistance was again given by the division to CHDs in in-service training of pool operators. The short schools were held in Alachua, Escambia, Hillsborough, Okaloosa, Orange and Pinellas (at Clearwater and St. Petersburg) Counties. A total of 254 pool operators was in attendance.

NATURAL BATHING PLACES

Table 41 shows the locations by counties of the number of permitted natural bathing places in the state; there were only two new permits issued during the year, both located in Pinellas County. There continues a need for inventorying all the places on natural bodies of water in the state which are made available to the public for swimming and bathing.

COMMON CARRIER WATER SUPPLIES

The surveillance of water supplies providing potable and culinary water used by interstate carriers was continued during 1963. This program of sanitary control is conducted under a cooperative agreement with the USPHS on the basis of Interstate Quarantine Regulations and Drinking Water Standards. It involves establishing and maintaining an adequate bacteriological sampling schedule, surveillance of chemical and physical quality of water, survey and inspection of supply and treatment facilities and review of analysis results, all followed by appropriate action to correct deficiencies and insure safety of the water supply.

Supervision of sanitary aspects of methods and facilities for placing water aboard aircraft, railway trains and vessels operating in interstate traffic is a function of the Division of Sanitation.

Field work involved was accomplished by CHD personnel principally at regional and local levels, but several supplies were also inspected by representatives of the USPHS in company with central office personnel. Results of field activities were reported to the central office, which utilized

the submitted data to coordinate subsequent field operations. These reports also served as the basis, in most instances, for recommendations of the division to the USPHS Regional Office, relative to the approval or disapproval of each individual supply.

The program encompassed 32 water supplies, continued from the previous year; and another supply was inspected and added during the year. Details of the supplies are shown in Table 44. Of these 33 supplies, 12 serve airlines, 17 railways and 15 vessels. Each supply was inspected to determine compliance with acceptable criteria. Additional field visits were frequently necessary.

During the year, analytical work continued for the possible detection of trace elements such as heavy metals and exotic chemicals. One supply was kept on provisional status throughout the year, while four others were reduced from approval to provisional status.

TABLE 40
NUMBER OF WATER PROJECTS APPROVED, CAPACITY INCREASE, AND ESTIMATED COSTS, BY COUNTY, FLORIDA, 1963

COUNTY	Projects Approved	Capacity Increase MGD*	ESTIMATED COSTS		
			Water Supply	Distribution	Total
Alachua	5	1.462	\$ 98,150	\$ 239,430	\$ 337,580
Baker	1	0.288	40,000		40,000
Bradford	1	1.000	56,000		56,000
Brevard	111	3.150	470,000	2,614,166	3,084,166
Broward	59	29.703	3,618,000	3,464,047	7,082,047
Charlotte	5	1.080	110,000	89,500	199,500
Citrus	2		1,500	60,000	61,500
Clay	6		26,350	18,550	44,900
Collier	5	0.403	34,500	132,000	166,500
Columbia	1			2,500	2,500
Dade	68	17.764	931,200	2,519,471	3,450,671
Duval	61	9.827	179,950	637,936	817,886
Escambia	2	0.576	13,500	347,000	360,500
Flagler	3	0.710	157,300	352,900	510,200
Franklin	1	0.000	32,180	82,070	114,250
Glades	1	0.058	5,500	2,800	8,300
Hardee	1	1.440	65,000	44,000	109,000
Hendry	2			57,500	57,500
Hernando	4	0.274	7,450	18,450	25,900
Highlands	1	2.880	12,000		12,000
Hillsborough	19	4.178	476,000	645,293	1,121,293
Holmes	1	0.216	12,000	33,000	45,000
Indian River	2			90,300	90,300
Jackson	1	0.432	55,000	44,000	99,000
Lake	13	9.552	733,600	79,650	813,250
Lee	11	0.592	126,500	746,500	873,000
Leon	2	0.266	4,500	7,500	12,000
Levy	1			24,000	24,000
Manatee	20	0.288	9,865	198,213	208,078
Marion	5	0.866	45,000	179,316	224,316
Martin	2	1.300	50,000	5,500	55,500
Monroe	4			31,690	31,690
Okaloosa	4	0.790	103,665	213,970	317,635
Okeechobee	1	1.000	12,500		12,500
Orange	14	17.120	965,000	319,584	1,284,584
Osceola	3	1.519	19,115	46,717	65,832
Palm Beach	55	6.328	544,250	1,008,264	1,552,514
Pasco	11	2.411	59,659	108,250	167,909
Pinellas	49	0.043	5,700	1,296,640	1,302,340
Polk	9	1.406	102,460	600,018	702,478
Putnam	2	1.300	200,000	250,000	450,000
St. Johns	2	4.470	220,000	247,600	467,600
St. Lucie	4	4.000	980,000	169,751	1,149,751
Santa Rosa	3			121,000	121,000
Sarasota	32	4.517	1,092,980	1,216,525	2,309,505
Seminole	11	2.307	75,000	278,270	353,270
Sumter	3	1.716	114,762	52,386	167,148
Suwannee	1	0.231	15,000		15,000
Taylor	2	0.144	500	114,500	115,000
Union	1	0.000	98,000	40,000	138,000
Volusia	33	5.585	399,700	921,521	1,321,221
TOTALS	661	143.192	\$12,374,336	\$19,772,278	\$32,146,614

*Million Gallons Per Day

TABLE 41

PERMITS ISSUED FOR SWIMMING POOL, NATURAL BATHING PLACES, WATER WELLS AND PLANS APPROVED FOR PROPOSED PUBLIC SWIMMING POOLS, BY COUNTY, FLORIDA, 1963

COUNTY	PERMITS ISSUED				Plans approved for Proposed Public Swimming Pools	
	Swim- ming Pools*	Natural Bathing Places*	Water Supply Wells	Swim- ming Pools	Number	Estimated Cost
STATE.....	2871*	55	304	333	417	\$4,260,774.00
Alachua.....	19	2	10	2	4	*** 95,000.00
Baker.....	1					
Bay.....	50	1	1	11	10	*** 95,000.00
Bradford.....	6		2	1	1	6,000.00
Brevard.....	18		13	4	23	***362,335.00
Broward**.....	691	2	5	101	110**	***755,562.00
Calhoun.....						
Charlotte.....	3					
Citrus.....	5		1	2	3	17,100.00
Clay.....	5	8	4		1	***
Collier.....	20		1	2	9	65,000.00
Columbia.....	7		1	1	1	12,000.00
Dade**.....	759	2	12	69	85**	***748,764.00
DeSoto.....						
Dixie.....					1	10,000.00
Duval.....	85		16	11	11	***161,800.00
Escambia.....	26	1	3	5	4	38,000.00
Flagler.....	3		4	1		
Franklin.....		1			1	16,000.00
Gadsden.....			2		1	10,000.00
Gilchrist.....	4					
Glades.....					1	10,000.00
Gulf.....						
Hamilton.....		1	2			
Hardee.....			1			
Hendry.....	2					
Hernando.....					1	7,586.00
Highlands.....	3	1	2			
Hillsborough**.....	59	7	18	7	9**	224,450.00
Holmes.....			1			
Indian River.....	10		1		2	20,000.00
Jackson.....	4					
Jefferson.....	1			1		
Lafayette.....			1			
Lake.....	20	1	14	2		
Lee.....	29		1	2	15	152,600.00
Leon.....	25	3	8	4	1	***
Levy.....	5		2			
Liberty.....		2				
Madison.....	2		2			
Manatee.....	14	2	13	1	2	16,000.00
Marion.....	43	3	21	1	1	8,241.00
Martin.....	8		3	2	3	54,500.00
Monroe.....	44			1	5	54,000.00
Nassau.....	15			1	1	9,000.00
Okaloosa.....	19		7	4	3	25,680.00
Okeechobee.....	2		2	1	2	30,500.00
Orange.....	53	1	20	7	8	92,550.00
Osceola.....	2		4		2	15,000.00
Palm Beach****.....	226	1	10	25	25****	248,050.00
Pasco.....	4		12	1	2	23,000.00
Pinellas.....	235	5	2	33	26	416,316.00
Polk**.....	59	3	7	4	6	91,000.00
Putnam.....	9		3	1	1	4,000.00
St. Johns.....	36		2	3	2	18,000.00
St. Lucie.....	18		13	3	1	6,000.00
Santa Rosa.....	2		2		1	5,500.00
Sarasota.....	69	2	21	7	14	137,740.00
Seminole.....	8	4	8			
Sumter.....	3		7	2		
Suwannee.....	3					
Taylor.....	12			1		
Union.....						
Volusia.....	119		16	8	18	203,500.00
Wakulla.....	1	1				
Walton.....	3		1	1	1	5,000.00
Washington.....	2	1				

*Accumulative Totals — Adjusted on basis of an all-county Swimming Pool Inventory.
(4 pools were razed and permit numbers re-used).

**County Approvals

***Costs omitted on one pool approval.

****Partial County Approved Pools (beginning September, 1963).

TABLE 42

NUMBER OF WATER PLANT OPERATIONS VISITED,
NUMBER OF VISITS, AND EXISTING PLANTS,
BY COUNTY, FLORIDA, 1963*

COUNTY	No. of Plants Visited	No. of Visits	Existing No. Plants (as of 1959)
STATE.....	76	110	779
Alachua.....	1	1	10
Baker.....	3	3	2
Bay.....			13
Bradford.....	8	10	2
Brevard.....			12
Broward**.....			34
Calhoun.....	3	7	1
Charlotte.....			3
Citrus.....			8
Clay.....	1	3	6
Collier.....			1
Columbia.....	2	4	48
Dade**.....	1	1	3
DeSoto.....			2
Dixie.....	5	6	89
Duval.....	4	5	15
Escambia.....			2
Flagler.....	2	2	6
Franklin.....			5
Gadsden.....			1
Gilchrist.....	1	1	2
Glades.....	2	3	4
Gulf.....			3
Hamilton.....			4
Hardee.....	2	2	2
Hendry.....			3
Hernando.....			9
Highlands.....	1	2	23
Hillsborough**.....			1
Holmes.....			7
Indian River.....			12
Jackson.....			3
Jefferson.....			1
Lafayette.....	1	3	13
Lake.....	2	3	7
Lee.....			32
Leon.....			5
Levy.....			1
Liberty.....			4
Madison.....	5	9	28
Manatee.....	1	1	12
Marion.....	1	3	5
Martin.....			2
Monroe.....			4
Nassau.....	2	3	11
Okaloosa.....			2
Okeechobee.....	1	1	94
Orange**.....			3
Osceola.....	8	11	35
Palm Beach**.....	1	1	15
Pasco.....	2	2	13
Pinellas**.....	4	4	34
Polk**.....	1	1	5
Putnam.....	1	1	4
St. Johns.....	3	7	2
St. Lucie.....			6
Santa Rosa.....	3	3	24
Sarasota.....	1	2	35
Seminole.....			4
Sumter.....			2
Suwannee.....			2
Taylor.....			2
Union.....	3	5	20
Volusia.....			4
Wakulla.....			5
Walton.....			4
Washington.....			

* By Central Office personnel except where otherwise noted.

**County Health Departments having engineering personnel.

TABLE 43
WATER AND SEWAGE WORKS OPERATORS
SHORT SCHOOLS, FLORIDA, 1963*

Short School	Applicants		Voluntary Certification Examination			
			No. Taking Exam.		No. Passing Exam.	
	Water	Sewage	Water	Sewage	Water	Sewage
Annual (Univ. of Fla.)						
(1) Class "A".....	6	9	6	9	5	7
(2) Class "B".....	9	24	9	24	8	17
Regional Class "C"						
Region 1. N.W. Fla.....	7	12	5	12	4	1
Region 2. N.E. Fla.....	15	19	14	19	7	8
Region 3. Cent. Fla.....	15	24	15	24	4	11
Region 4. West Cent. Fla..	26	56	24	56	15	25
Region 5. Dade Co.....	23	17	20	17	4	5
Region 6. S.E. Fla. except						
Dade & Broward Co.'s..	23	18	18	18	10	8
Region 7. Broward.....	23	8	23	8	9	1
Region 8. (4-A). S.W.						
Cent. Fla.....	21	18	21	18	7	6
Proctored Class "C".....	3	2	3	2	3	2
Total Class "C".....	156	169	143	169	63	67
Total Classes "A", "B", "C".	171	202	158	202	76	91

*This is a program of in-service training and home study under the aegis of the State Board of Health carried out jointly with the Extension Division of the University of Florida, the Florida Water & Sewage Works Operators Association; Florida Section, American Water Works Association; and Florida Pollution Control Association.

TABLE 44
SANITATION OF WATER SUPPLIES SERVING COMMON
CARRIERS, BY COUNTY, FLORIDA, 1963

COUNTY	No. of Supplies	Type Carrier Served			Ownership (1) of Supply		No. of Reports Submitted Recommending Status Shown	
		Air	Rail	Vessel	M	P	Approved	Provisional Approved
Bay.....	2			X	1	1	1	1
Brevard.....	1			X	1		1	
Broward.....	2	X			2		2	
Collier.....	1		X		1		1	
Dade.....	1	X	X	X	1		1	
DeSoto.....	1		X	X	1		1	
Duval.....	2	X	X	X	2		2	
Escambia.....	1	X	X	X	1		1	
Gulf.....	1			X	1	1	3	1
Hillsborough.....	2	X	X		1		1	
Lee.....	1		X		1		1	
Leon.....	1	X	X		1		1	
Manatee.....	1			X			1	
Monroe.....	1			X			1	
Nassau.....	1			X		1	1	
Okaloosa.....	1	X			USAF		1	
Orange.....	1	X			1		1	
Palm Beach.....	2	X	X	X	2		2	
Pasco.....	1		X			1	1	1
Pinellas.....	2	X	X		2		4	
Polk.....	1		X		1		1	
St. Lucie.....	1			X	1		1	
Sarasota.....	1		X		1		1	
Seminole.....	1		X		1		1	
Sumter.....	1		X		1		2	
Volusia.....	2	X	X		2			
TOTALS.....	33				29	4	33	5

(1) Ownership: M-Municipal P-Private

BUREAU OF SPECIAL HEALTH SERVICES

S. D. DOFF, M.D., M.P.H.
Director

The bureau has a major but not an exclusive role in planning and promoting programs designed for the prevention and early detection of diseases causing chronic illness; planning and executing programs to improve the quality of care in hospitals and related facilities; planning and administering medical care programs for the indigent sick.

Of all of the diseases of man those which are characterized as "chronic" or "long term" are now causing physical and economic dependency of such staggering proportions as to arouse public reaction to a degree exceeded only by community response to an acute major disaster. Reasons for the rapidly rising prevalence of chronic illnesses are given in the main body of this report.

The Division of Hospitals and Nursing Homes, in cooperation with the county health departments (CHD), is responsible for: review of all plans for construction or alteration of hospitals and nursing homes; inspection and licensure of all hospitals and nursing homes; and administration of state programs providing certain medical care services for the indigent sick. The Division of Chronic Diseases develops programs and provides consultation for the control of cancer, heart disease, diabetes and glaucoma by established public health methods. The health programs of the bureau are strongly oriented to meet the needs of persons who are chronically ill and/or enfeebled by old age.

Some significant events of the year's work include the following: completion of a three-year study of cancer of the uterus; its occurrence and methods of control; establishment of a central statistical service for tumor clinics and cancer registries; establishment of a second community glaucoma detection program; organization of six new lay diabetes societies; expansion of medical care services for medically indigent persons 65 years of age and older (Medical Assistance for the Aged — Kerr-Mills); increase in available licensed nursing home beds by about 2000 and in available general and special hospital beds by about 1000 (exclusive of federal and state hospitals); completion of a study of the nursing home care needs of patients in nursing homes as a foundation for the development of criteria for staffing such facilities; and an intensive drive to improve fire safety in medical care facilities. The work of this bureau is also reflected in the reported activities of CHDs which have devoted increased man hours or personnel to local programs of chronic disease control, improvement of medical care facilities and provision of certain health care services to the indigent sick.

The scope of bureau activities requires a continuous relationship at the operational level with every organizational unit in the State Board of Health. Outside of the agency regular liaison is required with the State Department of Public Welfare, Development Commission, State Fire Marshal's Office, Children's Commission, Council for the Blind, State De-

partment of Education and the Florida Institute for Continuing University Studies. Voluntary health organizations and professional groups include: American Cancer Society, Florida Division; Florida Cancer Council; Heart Association; Florida Heart Council; Diabetes Association; Society for the Prevention of Blindness; Lions Foundation for the Blind; Florida Hospital Association; Florida Medical Association and the Florida Nursing Home Association.

The Advisory Committee on Health Services for the Indigent and the Advisory Council on Hospital Licensure provided valuable guidance in the administration of these two programs.

DIVISION OF CHRONIC DISEASES

JAMES E. FULGHUM, M.D.
Director

More and more the role of chronic disease and its relationship to the community as a whole is becoming a major factor in planning public health programs. The diseases of the heart, blood vessels, cancer and diabetes cause over 70 per cent of the deaths of Florida citizens. The chronic diseases, such as glaucoma, arthritis and stroke, also cause most of the prolonged disabilities experienced by many of the population.

The division has the following ongoing programs: cancer, diabetes, heart and neurological and sensory disease. All are described in the following pages.

During the year, a Comprehensive Plan for Chronic Disease has been continued by contract with the U.S. Public Health Service (USPHS). An assessment of the chronic disease problems in the state, together with an evaluation of the health resources of the counties and plans, whereby the greater health needs of the community can be met, were made. Further attention is indicated in categorical areas such as arthritis, problems of the neurological and sensory systems, and such other areas as out-of-hospital care of the chronically ill.

Florida's geographic, economic and sociologic make-up is so varied that no master blueprint can be made to fit all areas and types of population.

In 1963, the division staff provided field consultant visits as follows: cancer, 57; heart, 69; diabetes, 6; prevention of blindness, 34; special projects, 148; with a total of 314.

Five USPHS staff members were assigned to chronic disease control work in Florida.

CANCER CONTROL PROGRAM

Death rates for cancer revealed a 23 per cent increase versus an 16 per cent rise in the heart disease death rate from 1952 to 1962. Most of the increase in cancer mortality rates can be attributed to cancer of the respiratory system which jumped 77 per cent during the last decade.

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Tumor Clinics — During 1963, the Cancer Control Program continued to work with the 24 associated tumor clinics in the state.

These tumor clinics are staffed by private physicians of the community who serve without compensation. Ancillary personnel, such as tumor clinic secretaries, typists and tumor registry secretaries are paid by the State Board of Health (SBH) with some assistance from the American Cancer Society, Florida Division. Volunteer workers also assist in the operation of the clinics without compensation.

The tumor clinics of the state are open for consultation service to all patients, private or clinic, when referred by their physician. Medically indigent patients, who are known to have or suspected of having cancer, are referred to the tumor clinics by a physician. The Cancer Control Program pays fees for outpatient diagnostic laboratory services and diagnostic X-ray procedures.

Where hospitalization is required for treatment, eligible patients may be hospitalized under either the Hospital Service for the Indigent (HSI), the Public Assistance Recipients (PAR) program or the Medical Assistance for the Aged (MAA) program.

Table 45 provides comparative information on cancer patient visits to these associated tumor clinics during the past four years.

Cancer Registries — This Program carried out its responsibility for insuring that approved tumor clinic registries conform to the standards of operation. Minimum requirements for tumor clinics embrace the assigned professional staff, the clerical staff, cancer records, maintenance of the tumor clinic registry and the case follow-up system. Sixteen tumor registries were provided secretarial and clerical assistance with some assistance from the American Cancer Society, Florida Division.

Consultant Services — Each tumor clinic was visited at least twice during the year, with emphasis placed on the training of clerical and secretarial employees, the improvement of cancer registry procedures and the utilization of registry material in providing feed-back of cancer data to the medical staffs. At periodic intervals, and upon request, statistical material was provided hospital staffs from their cancer registry.

Cervical Cytology Program — The cervical cytology program was continued for certain counties not having tumor clinics and not included in the Community Cancer Demonstration Project. This limited service provides for the screening of indigent postpartum cases being performed in the facilities of the county health department (CHD). Expansion of this program is highly desirable.

Special Projects

Statistical Tabulating Center for Cancer Registries — The Florida Association of Tumor Clinic Directors, Florida Division of the American Cancer Society and the SBH are cooperating in an effort to provide a reliable method of collecting, evaluating, interpreting and reporting cancer diagnoses and treatment information, and to assist in this a statistical tabulating center for cancer registries has been established at the central office of the SBH.

This project is approved and is funded by grant-in-aid assistance from the Cancer Control Program, USPHS.

The project is currently engaged in the collection of cancer data from selected tumor clinic registries and ultimately, collection of such data will be from all 24 clinics. These data are being collected for statistical analysis, study and report, and processed by IBM operations. Results of routine and special studies will be reported to the physicians of Florida.

Community Cancer Demonstration Project — A Community Cancer Demonstration Project, Cervical Cancer Cytology Survey of Aid to Dependent Children (ADC) recipients, was made possible by a grant from the USPHS and began screening patients on June 6, 1960. Screening operations are now complete, and 10,174 women had been screened as of July 1, 1963. About 57 per cent of the available population was examined.

Four hundred and nine women were found by the Papanicolaou technique to have had abnormal cytology (Pap III, IV or V) which accounted for about four per cent of the women examined. Cervical cancer proven by biopsy and found as result of this screening operation was 205 for a rate of 20 per thousand women examined. Seventy-nine per cent of the cervical cancer found was in the insitu stage and 21 per cent in the invasive stage. Women who were previously known to have cancer were eliminated from this survey. When women were found to have abnormal cytology (Pap III, IV or V), they were referred to the appropriate tumor clinic for diagnosis and if the biopsy was proven to be positive for cancer, treatment was initiated under the PAR Program.

Sustained and lasting interest was sparked by the program in many of the counties. Several CHDs have set up cervical cytology as a regular service for the medically indigent and welfare women while others have plans to set up such an ongoing program. During the reporting period, a "Pic-tape" was made which documented the steps involved in the planning and implementation of a program in a county.

The basic project results indicate a need for continuing cytology programs in Florida to find cancer of the cervix in the insitu or early invasive stages when the lesion is limited and has an excellent chance of being cured.

Cervical Cytology Project at Duval Medical Center (DMC) — The special research service project providing for a public health nurse to screen medically indigent adult females by the Papanicolaou technique operated throughout 1963 at DMC. Funds for this project were provided by the SBH, and the project is conducted jointly with the Duval CHD and the DMC.

Cervical Cytology Project at DMC — 1961-63 Report

Total Smears	Repeat Smears	Positive Biopsy	Abnormal Cytology Rate per 1000 Examinations	Positive Rate per 1000 Examinations
			Total	Rate
3928	331	37	91	25.2
				10.2

Educational Activities

Professional Educational Program — A number of Regional Cancer Seminars were held during the year. These were planned in conjunction with the regular Medical Society meetings. The professional educational program was reviewed and evaluated. It is felt that interest in cervical cytology has been actively stimulated through the ongoing programs. Major emphasis now is being placed on smoking and its effects on health.

The Florida Committee on Smoking and Health was formed at state level. This committee represents the Florida Medical Association; the SBH; the State Department of Education; the American Cancer Society, Florida Division; the Florida Heart Association; and the Florida Tuberculosis and Health Association.

Cancer Seminar for Dentists — The Bureau of Dental Health assisted the American Society of Oral Surgeons, and the American Cancer Society, Florida Division, in the presentation of a one-day Cancer Seminar for oral surgeons. Emphasis was placed on the early detection of oral cancer. Approximately 600 delegates attended the meeting.

A one-day regional workshop was held for tumor clinic secretaries and cancer registry personnel involved in this project.

Programs Requiring Expansion

Program for the Care of the Advanced Cancer Cases — Care of the advanced cancer patient is one of the urgent problems facing communities of Florida. Existing laws do not permit the provision of hospitalization to this type patient unless there exists a medical or surgical emergency requiring hospitalization. In addition to other benefits, the availability of an out-of-hospital service for care of the advanced cancer patient would result in a decrease in the number of hospital admissions and provide a savings in fund by a reduction in the length of hospital stay for certain of those admitted.

Florida Cancer Council — The Florida Cancer Council continues as the top advisory group for cancer clinics and programs. The council consists of members representing the Florida Medical Association, the American College of Surgeons, the Florida Division of the American Cancer Society, the Florida Association of Tumor Clinic Directors and the SBH.

HEART DISEASE CONTROL PROGRAM

HARVEY G. TOUSIGNANT, M.D.

Cardiovascular diseases are the cause of over 50 per cent of deaths in Florida. Included in this group are diseases of the heart which account for approximately 36 per cent of the deaths from all causes each year and cerebral vascular diseases which contributes an additional 11 per cent of the deaths from all causes. Two other cardiovascular diseases that regularly rank within the first 10 leading causes of death in Florida are general arteriosclerosis and other diseases of the circulatory system.

Policy

The Florida Policy and Coordinating Council for Cardiovascular Diseases — This council which was organized in May 1962 met three times during the year. At the April 19, 1963, meeting of the Council the Florida Society for Crippled Children and Adults was invited to membership in the Council.

Nursing and Clerical Positions — This program supplied 14 counties with nursing and clerical positions at an annual cost of nearly \$100,000. These positions were designed to support the Florida Heart Clinics and the Cardiovascular Home Nursing Program.

Training and Education

School Health Program — A new curriculum guide for instructors is being prepared by the State Department of Education. The director of this program was invited to participate in the preparation of the sections dealing with the heart and its functions.

Audio-Visual Aids — Arrangements have been completed with the Florida Heart Association to maintain all of their films in the Audio-Visual Library of the SBH.

Consultative and Community Services

Myocardial Infarction Intensive Care Unit — It has been estimated that 25 per cent of the persons incurring an acute myocardial infarction will die of their disease within a 24-72 hour period. It has been postulated that an intensive care unit with automatic electronic monitoring equipment could provide a skilled observer with essential clinical data which might be life saving. One such seven-bed unit has been installed at a hospital in Miami. Other hospitals in the state are planning to install similar units. The Heart Disease Control Program will collect, coordinate and disseminate information on these projects and be available on consultant basis to any hospital staff planning to install such equipment.

Health Profile Screening Project — In cooperation with the Jefferson CHD and with the assistance of the interested community groups, the Demonstration Health Profile Screening Clinic continued to operate. By December, the clinic had screened over 1000 persons. Many previously unrecognized disease conditions were discovered. A considerable number of patients with abnormal electrocardiograph readings were referred to their private physician. The results of the first 1000 examinations are now being analyzed. The objectives of the program as initially stated were: to offer multiple screening to the public, to refer patients to the physician of their choice, and as a health education technique, to promote routine health examinations.

Penicillin Prophylaxis and Rheumatic Fever Registry — Prevention of recurrences remains an important contribution public health can make towards curtailing this disease. This is accomplished by continuous long term use of penicillin and sulfa drugs. To assist the medically indigent, this program continues to provide those medications free of charge pro-

viding a request is received from the patient's physician. As of December 31, 1963, 691 persons were receiving prophylactic medication.

Stroke Rehabilitation — Hillsborough County — Local and state agencies cooperated in developing a Stroke Rehabilitation Program in the Hillsborough County Hospital. This project consisted of three phases: teaching of hospital personnel how to care for the stroke patient, the rehabilitation of the patient and orientation of the family on care of the patient at home. Much of the coordination of the project was delegated to a state nurse who spent one year in this county. She, in turn, trained a county hospital nurse who is presently acting as project coordinator under the supervision of the hospital medical director.

In 1960 prior to any rehabilitation only 15 per cent of stroke victims were able to walk and 38 per cent returned to their home. During 1963, rehabilitation was instituted and 64 per cent were able to walk and 64 per cent returned to their homes. There was also an eight per cent drop in mortality.

Stroke Rehabilitation — Palm Beach County — Several months ago a general rehabilitation program under the direction of a part-time specialist in physical medicine was established at the county hospital. A rehabilitation center was set up and a full-time physical therapist and occupational therapist added to the staff. The project first involved patients at the county hospital, a number of whom were stroke victims and is being extended to private nursing homes and to patients receiving home nursing service.

Special Projects

Five County Survey of CHD Nursing Service of Cardiovascular Patients — A survey of these patients who receive service from public health nurses was conducted in: Alachua, Clay, Duval, Escambia and Volusia Counties. Patients' records were reviewed to determine medical data of interest recorded during the previous year by the visiting public health nurses. Of particular interest was the observation that approximately one-fifth of the cardiovascular cases receiving home care were stroke patients. It is also noteworthy that more patients were receiving nursing care for congenital heart disease than for rheumatic heart disease. The total number of nursing visits made during the year to the 552 patients was 9374.

Telephone Survey — Hillsborough County — Physicians in the county most apt to see cases of rheumatic fever and acute glomerulonephritis were contacted monthly by telephone and asked to report the number of cases of the above diseases seen during that period.

This survey was conducted for a 16 month period. Twenty-nine cases of rheumatic fever were reported, eight of whom had a previous history. Sixteen cases were confirmed, 13 remain as suspects. Urine examinations were done on several of these patients for 5-methoxytryptamine. There was a strong correlation between positive urines and patients having a history of rheumatic fever, a family history or the acute phase of the disease.

Stroke Incidence and Longevity Survey — A survey was begun July 1, 1963, in Alachua County to determine the number of residents hospitalized or dying from stroke during a one year period.

Local hospital admission records have been checked regularly and necessary information abstracted from the record such as name, age, race, date of onset, etc. Death certificates have been reviewed regularly at the CHD and at the SBH for those dying from this cause outside the county or state.

Sodium Content of Municipal Water Supplies — The survey to determine the sodium content of Florida municipal water supplies was continued during the year. The information obtained from these studies will be made available to physicians throughout the state to assist them in their management of cardiac and hypertensive patients.

DIABETES CONTROL PROGRAM

As people live longer the diabetes population in the state is expected to undergo a significant increase, more rapid than the general population increase. In 1963, preliminary data show 878 deaths from diabetes among Florida residents.

From 1952 to 1962 inclusive, 6235 Florida residents died from diabetes mellitus. Females, both races, accounted for 56 per cent of these deaths. In 1962, this disease was responsible for 1.4 per cent of total fatalities and ranked as the ninth leading cause of death in the state. Additional study of the nonwhite diabetic female group is contemplated to determine why they die 20 years ahead of their white counterpart.

Most authorities now agree that the disability caused by complications of diabetes is extensive. Retinitis due to diabetes now ranks equal to glaucoma as a cause of blindness. Arteriosclerosis caused by diabetes is a large etiological factor in deaths from coronary occlusion.

Diabetes control at state level is to integrate all phases and stages of attack into a coordinated program. This program is organized as follows: insulin distribution, casefinding and education.

Insulin Distribution — Appropriated funds in the amount of \$80,000 per year for insulin is used for the medically indigent diabetic patients of the state. About 3000 medically indigent patients are now receiving all or part of their insulin from state sources through the CHDs. The insulin distribution program has excellent built-in features: a local diabetes registry which has excellent usage for follow-up, for relative casefinding programs in the counties and as a reliable source of data for program evaluation.

Casefinding and Service to the Patient — Diabetes, in most cases, can be controlled by proper treatment. However, this treatment is most effective if the diabetes is diagnosed early. Casefinding is primarily the responsibility of the CHDs with assistance from the community and the SBH in the area of consultation, program planning and limited financial aid to do diabetes surveys. These activities have been primarily in three areas: office of the physician, community diabetes screening surveys and relative testing programs.

Education

This part of the Diabetes Control Program is directed to the information and educational aspects of the disease and consists of three parts: professional information, lay education and patient education.

Professional Information — The Florida Diabetes Seminar for physicians was held October 24 and 25 in Miami Beach. The Florida Diabetes Association, the University of Miami School of Medicine, the Postgraduate Education Branch of the University of Florida College of Medicine and the SBH cooperated in the planning and presentation of this professional seminar. About 100 Florida physicians attended this two-day meeting.

Lay Education — Lay Diabetes Societies are the most important means of promoting lay educational activities, casefinding and patient education. During the past year this staff has assisted the Florida Diabetes Association staff in the organization of additional local societies. At this time there are nine active areas: Bradenton, Daytona Beach, Gainesville, Jacksonville, Lakeland, Greater Miami, Orlando, Sarasota and St. Petersburg.

Timely Topics, a monthly bulletin on diabetes is prepared and sent to 5500 persons per month, most of whom are diabetics, relatives of diabetics or have an interest in diabetes control.

Large coordinated community diabetes screening programs are being conducted in Florida during Diabetes Week, during health fairs, and at other times. One county screened 4500 persons in two days. Persons found with positive urines were referred for blood sugar examinations. Post prandial blood sugar examinations two hours after a test meal are considered the method of choice.

Patient Education — A number of CHDs are carrying out programs of patient education. This can best be done by a coordinated program co-sponsored by the CHD, the local medical society and the county unit of the Lay Diabetes Society. One county was able to sharply reduce the admissions to hospital for complication due to diabetes by a patient education program.

PREVENTION OF BLINDNESS PROGRAM

Major emphasis of this program has been placed on glaucoma which accounts for about 15 per cent of all blindness and is the second most common cause of blindness in Florida. Loss of vision caused by glaucoma is preventable in a high proportion of the cases if the disease is detected early and adequately treated. Glaucoma occurs most often after the age of 40, and the disease increases in incidence with age.

It is the objective of this program to establish full-time continuous eye screening clinics in localities where there is an adequate number of ophthalmologists.

Special Projects

Polk County Eye Clinic — The Polk County Eye Clinic, which has been in operation since April 1962, has continued to be successful. Plans for the immediate future include the employment of a full-time orthoptic

technician who will assist with an amblyopia ex anopsia (crossed eyes) screening program for the preschool child. The purpose of this study is to determine the best method of screening preschool children.

In this county, the staff has initiated plans for a family-relative study on those persons who have been diagnosed with glaucoma. The purpose is twofold: First, each patient is questioned to determine what he has done to follow-up his diagnosis. Secondly, each is asked to supply the names and addresses of his blood relatives who reside in the county so that they may be invited to report for a glaucoma screening examination.

As of December 31, 1963, personnel of the Polk County Eye Clinic have performed 19,013 screening examinations and have referred 382 (2.01 per cent) persons to ophthalmologists for diagnostic evaluation (Table 46).

Volusia County Eye Clinic — In May 1963, preparations were begun for a glaucoma program in Volusia County. By September this center, known as the Halifax District Hospital Eye Clinic, was initiated in Daytona Beach. This clinic is supported by the Lions Foundation for the Blind, Inc., the CHD, the SBH and a local benefactor. The latter who had suffered an eye malady, has provided the latest up-to-date equipment for the clinic which is located in a renovated wing of the hospital.

A full-time nurse was employed and trained in tonometric procedures by three of the county ophthalmologists. She was then sent to the Bascom Palmer Eye Institute in Miami to obtain further training. Volunteer services have been provided by the Pink Ladies, and the public relations representative of the Chamber of Commerce has coordinated the publicity.

Since its inception on the above date, this Eye Clinic has gained wide acceptance. As of December 31, 1963, 3633 people have been screened for glaucoma, and 101 or 2.78 per cent have been referred to their respective physicians for diagnostic evaluation.

Educational Activities

Prevention of Blindness Manual — As more requests were received for additional information about the Polk County Program, the staff prepared a manual entitled, "Prevention of Blindness Program" which was made available to CHDs and a limited number of copies were made available to interested program planners.

Survey of Glaucoma Programs — In preparation for the Florida Medical Association Convention, the SBH assisted the chairman on vision of the Florida Medical Association in conducting a statewide survey of the number of persons who had been screened for glaucoma by community-sponsored programs.

Florida Medical Association Convention — The Florida Society of Ophthalmology and Otolaryngology and the SBH sponsored a scientific exhibit at the Florida Medical Association held in Hollywood, Florida, in May 1963. The purpose of the exhibit was to promote interest in glaucoma detection at the professional level. The use of the tonometer was demonstrated on a mannequin head provided by the USPHS. This exhibit won the first prize for scientific exhibits.

TABLE 45
TOTAL PATIENT VISITS TO TUMOR CLINICS ASSOCIATED
WITH CANCER CONTROL PROGRAM, BY CLINICS,
FLORIDA, 1959-1963

	TOTAL PATIENT VISITS				
	1959	1960	1961	1962	1963
Alachua General Hospital	100	108	148	198	212
Bay Memorial Hospital	559	606	526	494	768
Broward General Hospital	505	432	738	563	500
Duval Medical Center	4,162	4,457	4,411	5,028	5,550
Escambia General Hospital	1,514	1,548	1,698	2,462	2,960
Lee Memorial Hospital	51	136	172	44	100
Fort Pierce Memorial Hospital				129	224
Jackson Memorial Hospital	2,199	2,556	3,788	3,482	3,908
Tallahassee Memorial Hospital	1,096	1,139	1,382	1,280	1,375
Manatee Memorial Hospital	209	185	219	243	219
Munroe Memorial Hospital	43	87	120	150	100
Mount Sinai Hospital	620	784	1,001	1,238	1,270
Okaloosa County Tumor Clinic				151	154
Orange Memorial Hospital	1,305	1,162	2,034	2,819	2,974
St. Mary's Hospital	1,013	967	1,154	919	961
Mound Park Hospital	1,009	1,189	1,783	1,829	2,642
Polk County Tumor Clinic	1,269	1,223	1,690	1,922	1,833
St. Vincent's Hospital	1,103	1,282	1,570	1,670	1,735
St. Francis Hospital	785	742	902	830	774
Sarasota Memorial Hospital	204	212	217	297	336
Tampa General Hospital	1,551	3,095	2,950	3,961	3,967
University of Florida	512	1,929	4,661	3,162	3,662
Variety Children's Hospital				710	812
Halifax District Hospital	30			204	300
TOTAL	19,892	24,874	32,338	33,786	37,336

TABLE 46
POLK COUNTY, FLORIDA, GLAUCOMA SCREENING
PROGRAM, TOTAL NUMBER OF PERSONS EXAMINED
AND NUMBER OF SUSPECTS DISCOVERED, BY SEX
AND AGE, APRIL 1962—DECEMBER 31, 1963

Age	TOTAL PERSONS EXAMINED			NUMBER SUSPECTS DISCOVERED			
	Male	Female	Total	Male	Female	Total	
						No.	Per Cent
Under 40	3422	2964	6386	25	21	46	.72
40-44	915	1242	2157	8	10	18	.83
45-49	876	1229	2105	10	25	35	1.66
50-54	763	1105	1868	16	24	40	2.14
55-59	633	958	1591	21	23	44	2.77
60-64	543	831	1374	13	27	40	2.91
65-69	609	824	1433	22	35	57	3.98
70-74	540	605	1145	23	26	49	4.28
75-79	317	261	578	19	12	31	5.36
80-84	169	85	254	8	7	15	5.91
85+	82	40	122	5	2	7	5.74
Totals	8869	10,144	19,013	170	212	382	2.01

Follow-up Data:

Those referred to ophthalmologists for diagnoses: 382
(2.66% of those over 40)

- a. Cases diagnosed Glaucoma 206
- b. Borderline Glaucoma Cases 26
- c. Cases Closed—No Glaucoma 118
- d. Pending Cases—still being followed 27
- e. Lost to Follow-up
 - 1. Cannot locate 3
 - 2. Uncooperative 1
 - 3. Illness 1

Number of persons who could not read 20/40 3473

DIVISION OF HOSPITALS AND NURSING HOMES

CHESTER L. NAYFIELD, M.D., M.P.H.
Acting Director

The main functions of this division which include hospital and nursing home licensure and the hospital service for the indigent program were continued this year.

The hospital licensure program continued its expansion due to the increase in the number of hospitals and hospital beds caused by our growing population. Through this program of consultation and inspection, a definite improvement in hospital operation and construction was noted in 1963.

The number of nursing home beds continued to show a considerable increase while only a slight increase occurred in the number of nursing homes. This is attributed to the cost involved in operating a small nursing home as compared to a larger one. The responsibility for licensure still remains with the county health departments (CHD) and local authorities responsible for fire, electrical, plumbing, building and zoning inspections. New forms for license application and inspection were developed and approved after a trial run in Dade County. Plans are made to use these forms throughout the state for the 1965 license applications.

The Hospital Service for the Indigent (HSI) program continued to show growth in both the state-county section as well as the Public Assistance Recipient (PAR) section. The latter section includes Old Age Assistance, Aid to Dependent Children, Aid to the Blind, and Aid to the Disabled. The State Legislature implemented the program of Medical Assistance for the Aged (MAA) which became effective July 1, 1963. Visiting nurse services after hospitalization became available under this program which is due for expansion in the next fiscal year.

HOSPITAL SERVICE FOR THE INDIGENT PROGRAM

Hospitalization services provided through the enactment of indigent health legislation continued their steady rise during 1963. Total claims

approved for payment during this year were \$8.982 millions, as compared with \$8.172 millions in 1962 and \$7.147 millions in 1961.

At the end of the year there were 160 hospitals participating in the HSI, PAR and MAA hospitalization programs. This compares with 162 participating hospitals at the end of calendar year 1962. Per diem rates have been established for 119 of these hospitals and the remaining 41 hospitals are reimbursed on the basis of actual billing, or \$15.00 per diem, whichever is less. The average per diem rate for all hospitals with established rates was \$28.93, an increase of 3.06 per cent over 1962.

The Legislature amended Chapter 409 Florida Statute (FS), Department of Public Welfare, providing hospitalization and visiting nurse care services to eligible recipients under the MAA program, effective July 1, 1963. Previous experience under the HSI program indicated that approximately 20 per cent of expenditures was for the hospitalization of persons 65 years of age and older so that shifts in program statistics will provide a rough estimate of the effectiveness of the MAA program.

Hospital Service for the Indigent (State-County) Program

This program was established in 1955 to provide hospitalization, visiting nurse care and outpatient clinic services to the medically indigent of the state through the medium of state-county financed assistance. Funds have not been available since the inception of the program to provide such visiting nurse care and out-patient clinic services and these sections of the statute have not yet been implemented.

State funds of \$1.025 millions were available for each year of the 1961-63 biennium to match the required 50 cents per capita from counties participating in the program. These amounts compare with the sums of \$885,900 and \$918,900 provided for hospitalization of the medically indigent for the two years of the 1963-65 biennium, a reduction of approximately 20 per cent. Implementation of the MAA program on July 1, 1963, anticipates that funds available will be increased due to federal matching.

During calendar year 1963, Gadsden, Gulf, Holmes, Lee, Wakulla and Washington did not participate in the state-county program. In addition Jackson and Highlands Counties did not participate during the first and last half of the year respectively.

Hospitalization services provided by this program are summarized in Table 47. Compared to the previous year the major indices of admissions, days of service and total claims processed and approved for payment showed reductions of 6.35 per cent and 5.6 per cent respectively. At the same time, the unit costs of the program continued their upward trend. The average cost per day rose 5.97 per cent and the average cost per admission .81 per cent. The disparity in the rates of increase is occasioned by a reduction in the average length of stay from 9.39 days in 1962 to 8.94 days in 1963. In this connection, the average length of stay for the last half of calendar year 1963 has decreased further to 8.44 days responsive, in part, to the MAA absorption of the aged group with their longer rates of stay.

Public Assistance Recipient Program

Hospitalization benefits were extended to the PAR in 1959 by an act amending Chapter 401 F.S., Hospital Service for the Indigent. The State Board of Health (SBH) administers this program under the terms of an agreement with the State Department of Public Welfare.

Hospitalization services provided to PAR have risen steadily since the inception of the program in 1959. Increases of 16.8 per cent, in total claims approved for payment, 10.6 per cent in the number of admissions and 10.9 per cent in the number of days of care provided occurred in the year.

Increases in unit costs were generally comparable, percentage-wise, with indices of the state-county program. The average cost per day increased 5.29 per cent and the average cost per admission 5.61 per cent.

Medical Assistance for the Aged Program

The benefits of this program are limited to persons 65 years and older who are medically indigent. Eligibility requirements differ from the two programs described above. Provision of hospitalization and visiting nurse care services to eligible recipients of benefits under this program were projected at a level of approximately \$2.5 millions for the first year of the biennium, based on \$1 million of state funds and \$1.5 million of federal matching funds. The program during the first six months of operation did not utilize available funds. Total claims processed through December 1963 amounted to \$340,443. The State Department of Public Welfare revised the criteria for eligibility on December 1, 1963; however, it is anticipated that the total funds available may not be expended.

Experience to date in the hospitalization portion of the program indicates a higher cost per admission of this group of patients due to older age group and longer stays in hospital. MAA costs per admission of \$367.65 compare with PAR costs per admission of \$242.42 and \$249.18 in the HSI program. The significant factor is the difference in the average length of stay encountered in the three programs; 13.21 days for MAA, 9.15 days for PAR and 8.94 days for HSI. A similar pattern is shown in the average cost per day of \$27.82 for MAA patients, \$26.49 for PAR cases and \$27.88 for HSI patients.

The visiting nurse care provisions of the MAA program have been utilized through December 1963 only to the extent of 50 admissions totaling 405 visits at a total cost of \$1,620. The most important reasons for the low utilization believed involved are: the limitation of eligibility to post-hospital patients; the previously restrictive financial eligibility policies which were relaxed on December 1, 1963; disinterest on the part of some physicians; and inadequate public knowledge concerning the program.

ADVISORY COMMITTEE TO THE HOSPITAL SERVICE FOR THE INDIGENT

This committee originally with five members was enlarged to seven and then to nine by acts of the Legislature in 1961 and 1963 amending

Chapter 401, FS. The present members of the advisory committee are: H. Phillip Hampton, M.D., Tampa, Chairman; Edward H. Jelks, M.D., Jacksonville; Frank J. Kelly, Miami, attorney at law; Joseph R. McAloon, Hollywood, hospital administrator; Ben P. Wilson, Ocala, hospital administrator; Don S. Evans, Orange County Commissioner; Lake Lytal, Palm Beach County Commissioner; State Senator Cliff Herrell, Miami Springs and State Representative Ray Mattox, Winter Haven.

The committee met in Jacksonville on May 4, June 9, and October 27, 1963. The committee urged the implementation of outpatient clinic and visiting nurse care services authorized in Chapter 401 FS; the reactivation of the nonresident portion of the HSI program with reservation of one per cent of the state appropriation for this purpose; recommended the adoption of revised financial eligibility levels for the MAA program; recommended that the days of home nursing care benefits to eligible recipients be increased from a maximum of 30 days after discharge from hospitalization to a maximum of 90 days after discharge from hospitalization.

RESERVATION INDIAN MEDICAL CARE PROGRAM

This program was continued under the contract with the U.S. Public Health Service with funds increased to \$38,000. The Indians living in established Indian communities in Broward, Glades and Hendry Counties were included in this program. A multiphasic health screening of the Miccosukee Indians living on the newly established federal reservation at 40 Mile Bend was accomplished with the cooperation of the Dade County Department of Public Health to pinpoint pre-existing needs for services. An amendment was negotiated to the program during the year in the amount of \$15,000 to include these Indians. This increased the total available funds in the Indian Program to \$53,000. Hospitalization and medical care not available under the medically or categorically indigent hospitalization programs, physician services, prosthetic appliances, eyeglasses and transportation to hospitals are the benefits provided.

TABLE 47
MAJOR EVALUATION INDICES BY TYPE OF
HOSPITALIZATION PROGRAMS, FLORIDA, 1963

Evaluation Order	1963		1962	
	Public Assistance Recipients	Hospital Service for the Indigent	Public Assistance Recipients	Hospital Service for the Indigent
Number of admissions.....	19,947	15,278	18,088	16,314
Days hospitalized.....	182,552	136,535	164,551	153,269
Total payments state and Federal or state and county.....	\$4,835,479.46	\$3,807,041.28	\$4,140,410.11	\$4,082,360.70
Average cost per day.....	\$26.49	\$27.88	\$25.16	\$26.31
Average cost per admission.....	\$242.42	\$249.18	\$229.54	\$247.17

Source: Applications processed and approved for payment reports.

TABLE 48
APPLICATIONS PROCESSED AND APPROVED FOR PAYMENT
BY HOSPITALIZATION PROGRAM, BY COUNTY,
FLORIDA, 1963

County	Public Assistance Recipients			Hospital Service for the Indigent		
	No. of Admissions	Days Hospitalized	Total Payments State & Federal	No. of Admissions	Days Hospitalized	Total Payments State & Local
TOTAL.....	19,947	182,552	\$4,835,479.46	15,278	136,535	\$3,807,041.28
Alachua.....	339	3,436	103,950.47	246	1,958	59,034.25
Baker.....	70	643	15,193.86	22	160	4,513.11
Bay.....	271	2,456	69,615.28	109	1,041	30,836.78
Bradford.....	139	1,295	35,470.54	34	268	7,198.30
Brevard.....	171	1,521	47,413.08	320	2,795	84,905.61
Broward.....	625	7,058	196,182.02	690	8,650	249,848.53
Calhoun.....	188	1,596	32,601.00	15	96	2,510.72
Charlotte.....	83	663	16,604.64	70	663	16,603.50
Citrus.....	68	594	14,752.94	38	318	8,018.21
Clay.....	94	771	20,361.94	40	292	7,918.96
Collier.....	49	324	10,838.92	43	421	14,573.76
Columbia.....	350	3,085	64,128.42	70	458	9,944.67
Dade.....	2,072	25,574	836,683.68	1,926	22,593	719,024.84
DeSoto.....	72	573	8,914.58	43	377	6,675.50
Dixie.....	69	575	17,908.58	20	112	3,692.17
Duval.....	1,296	11,796	316,797.74	2,208	14,727	382,415.61
Escambia.....	1,075	8,863	243,623.69	320	3,662	108,567.93
Flagler.....	26	312	7,689.99	7	57	1,455.73
Franklin.....	142	753	19,628.84	54	259	5,530.36
Gadsden.....	281	2,620	62,062.42		26	881.17
Gilchrist.....	38	377	11,512.24	6	33	1,131.16
Glades.....	20	174	3,325.94	2		
Gulf.....	81	546	12,321.79			
Hamilton.....	163	1,040	19,029.43	37	313	7,237.96
Hardee.....	71	573	11,292.19	28	348	7,230.03
Hendry.....	35	372	7,523.98	34	354	4,060.85
Hernando.....	80	719	13,069.93	42	424	8,500.05
Highlands.....	107	935	20,238.19	75	764	17,707.65
Hillsborough.....	1,101	9,449	204,695.21	2,067	14,072	387,463.18
Holmes.....	378	2,900	66,350.94			
Indian River.....	156	985	26,441.05	81	556	15,061.80
Jackson.....	434	3,481	79,018.47	2	24	458.56
Jefferson.....	59	416	10,994.85	18	197	4,510.49
Lafayette.....	75	634	12,797.16	5	50	1,397.65
Lake.....	231	1,737	45,599.50	190	1,494	41,244.84
Lee.....	167	1,515	47,455.73			
Leon.....	416	3,626	97,810.05	230	2,007	52,263.77
Levy.....	143	1,336	32,600.00	18	143	4,860.21
Liberty.....	98	674	14,846.90	5	34	784.28
Madison.....	222	1,781	44,705.85	29	274	6,401.22
Manatee.....	237	2,269	58,214.59	118	1,419	34,704.55
Marion.....	476	4,282	118,920.72	102	1,122	31,074.35
Martin.....	74	639	19,458.83	49	375	11,992.65
Monroe.....	166	1,740	50,644.90	100	1,021	30,704.65
Nassau.....	163	1,181	24,989.14	88	494	10,796.09
Okaloosa.....	375	2,679	72,013.76	202	1,348	37,488.11
Okeechobee.....	50	395	6,744.38	31	253	5,791.38
Orange.....	906	8,735	228,587.87	737	7,650	206,447.56
Osceola.....	166	1,299	22,409.26	42	268	5,424.64
Palm Beach.....	540	5,319	161,047.39	1,160	10,220	315,054.36
Pasco.....	143	1,115	26,374.78	127	1,061	26,066.97
Pinellas.....	865	9,067	228,605.67	1,132	10,669	273,712.79
Polk.....	388	3,473	87,072.60	878	6,268	147,296.90
Putnam.....	285	2,147	54,314.78	87	614	18,506.17
St. Johns.....	150	1,374	35,415.30	120	1,150	30,054.53
St. Lucie.....	164	1,612	46,783.75	125	1,939	56,274.28
Santa Rosa.....	510	3,770	101,649.37	30	228	6,469.99
Sarasota.....	232	2,348	62,815.78	280	3,429	95,215.43
Seminole.....	256	2,527	71,322.73	101	1,298	37,126.45
Sumter.....	105	964	23,543.91	41	312	6,780.16
Suwannee.....	327	2,442	45,476.42	65	430	8,279.23
Taylor.....	154	1,284	33,894.70	38	215	6,236.45
Union.....	106	1,109	19,525.31	19	201	4,856.63
Volusia.....	663	6,495	162,525.74	414	4,201	108,000.66
Wakulla.....	93	723	17,509.31			
Walton.....	503	3,359	76,394.93	48	330	8,222.89
Washington.....	295	2,427	57,221.51			

TABLE 49
MEDICAL ASSISTANCE TO THE AGED HOSPITALIZATION
APPLICATIONS PROCESSED AND APPROVED FOR PAYMENT,
BY COUNTY, FLORIDA, JULY 1 TO DECEMBER 31, 1963

	No. of Admissions	Days Hospitalized	Total Payments State & Federal
TOTAL.....	926	12,236	\$840,442.56
Alachua.....	14	134	4,265.87
Baker.....	1	26	693.68
Bay.....	9	104	3,252.72
Bradford.....	3	26	674.03
Brevard.....	15	179	5,004.03
Broward.....	68	1,031	28,128.88
Calhoun.....	3	24	529.92
Charlotte.....	7	66	1,382.88
Citrus.....	4	50	1,246.05
Clay.....	4	57	1,563.81
Columbia.....	9	71	1,443.26
Dade.....	237	3,548	115,466.35
Duval.....	104	1,339	37,480.28
Escambia.....	30	382	10,791.76
Franklin.....	7	47	1,056.13
Gadsden.....	3	50	1,317.14
Gilchrist.....	2	15	538.95
Gulf.....	1	5	122.45
Hardee.....	2	21	557.76
Hernando.....	16	228	3,764.82
Highlands.....	1	30	834.60
Hillsborough.....	36	457	9,569.36
Holmes.....	4	64	1,553.06
Indian River.....	4	33	891.13
Jackson.....	2	18	525.92
Lake.....	8	95	2,590.46
Lee.....	24	297	8,584.99
Leon.....	4	54	1,616.76
Levy.....	6	50	1,400.38
Liberty.....	1	8	191.60
Madison.....	1	7	180.04
Manatee.....	11	153	3,951.58
Marion.....	12	147	4,133.61
Martin.....	1	30	1,024.20
Monroe.....	4	83	2,445.01
Nassau.....	1	10	183.80
Okaloosa.....	6	42	1,043.13
Orange.....	33	412	10,165.45
Osceola.....	8	82	1,486.40
Palm Beach.....	40	527	14,732.82
Pasco.....	5	80	2,036.02
Pinellas.....	52	745	17,007.54
Polk.....	14	252	5,483.57
Putnam.....	6	48	1,520.80
St. Johns.....	11	110	2,319.37
St. Lucie.....	2	10	308.10
Santa Rosa.....	9	150	4,283.87
Sarasota.....	7	71	2,111.04
Seminole.....	14	157	3,833.26
Sumter.....	5	35	626.98
Suwannee.....	8	88	1,929.73
Taylor.....	12	113	2,700.55
Union.....	1	22	583.66
Volusia.....	32	338	8,988.90
Wakulla.....	1	2	42.98
Walton.....	1	13	276.12

HOSPITAL LICENSING PROGRAM

The increase in hospital building in new facilities, additions and renovations continued to show the expected annual increase, corresponding to the increasing population of the state. A concentration of hospital beds in the larger urban institutions shows the developing building trends. The smaller and submarginal hospitals are being eliminated and a progressive increase in hospital size is noted. The total number of hospitals remains stable but the growth in available hospital beds is noted by a six per cent increase over the previous year and a 10 per cent increase when compared to 1961.

Interest in the development of facilities in general hospitals and private institutions for the care of psychiatric patients has become evident. There were 958 psychiatric beds available in 1961 and this rose to 1031 in 1963, an increase of seven per cent.

Of the nine new hospitals opened in the calendar year, five were new construction; two represented hospitals whose licenses had expired and were renewed; one represented a replacement for an existing hospital; and one hospital both opened and closed within the calendar year. Of the four hospitals listed which ceased operation, one was a replacement facility; two voluntarily closed; and one opened and closed within the calendar year. As a result, there was approximately a five per cent increase in 1963 in the number of licensed hospitals over the 1962 figure and approximately an 11 per cent increase over 1961.

There continues to be interest manifested by the nursing home profession to qualify some of their institutions for hospital licensure as chronic disease and/or rehabilitation hospitals. Two licensed nursing homes in the state became licensed hospitals during the calendar year. Two additional nursing homes remain under consideration at the close of the year pending qualification and licensure as psychiatric hospital facilities.

Evaluation of hospitals against licensing standards was accelerated over the previous year by the hospital consultant staff of this agency, with the cooperation of the physicians, public health nurses and sanitarians of the various CHDs. As has been the case since the inception of the licensing program, close attention was given to those hospitals which continue to have difficulty in conforming to the minimum licensing requirements. The success of this emphasis is apparent in that there remain only two unlicensed hospitals in this state, both of which it is anticipated will qualify for license in the early part of 1964.

Additional activities in the field of hospital construction, maintenance and operation consumed a large portion of the hospital consultants' time. This division participated in the Nursing Home and Hospital Area Fire Protection Conferences for Paid and Volunteer Fire Department Personnel, sponsored jointly by the SBH and the Florida State Fire Chiefs Association.

As in previous years, this agency has been indebted for the services rendered by the Advisory Hospital Council whose membership consists

of the following: the State Health Officer, Wilson T. Sowder, M.D., who serves as chairman ex-officio; State Representative James H. Sweeney, Jr., DeLand; John F. Wymer, West Palm Beach; Autha W. Forehand, Tallahassee; William W. Richardson, M.D., Graceville; Raymond H. King, M.D., Jacksonville; and Walter D. Griffin, Jr., Jacksonville. The annual meeting of the Advisory Hospital Council was held in Jacksonville on April 24, 1963. The unlicensed hospitals not meeting the required standards were studied and courses of action were recommended. The development of rules and regulations for rehabilitation hospitals was also proposed.

TABLE 50
HOSPITAL EVALUATION STATISTICS, FLORIDA,
1961 - 1963

ITEM	Calendar Year		
	1961	1962	1963
Hospital accessions during year	8	7	9
Hospitals ceasing operations during year	3	2	4
Hospitals subject to licensure December 31	178	183	188
Licensed hospitals, December 31	166	177	186
Unlicensed hospitals, December 31	12	6	2
Licensed hospital beds, December 31	17,971	18,691	19,776
Unlicensed hospital beds, December 31	282	191	106
Licensed hospital bassinets, December 31	2,431	2,502	2,582
Unlicensed hospital bassinets, December 31	45	17	0
Hospital plans reviewed during year	87	125	92
Hospitals surveyed for licensure	106	73	99
Hospital consultations in the field		20	38

NURSING HOME LICENSING PROGRAM

The role of the nursing home continued to develop as part of the community medical resources. This was evidenced by a moderate increase in the number of licensed nursing homes and a large increase in the number of available beds.

The review of plans for new units, renovations and additions continued at a rapid pace. In 1963, 216 sets of plans were studied for 114 facilities which included 70 new units and 44 additions, alterations or conversions. Of these 84 were approved for licensure, 25 were disapproved and five were pending.

There were 19 new nursing homes and one home for the aged licensed during the year. This made an additional 1520 beds available in nursing homes and 12 in homes for the aged or a total of 1532. One nursing home which was licensed during the year closed its doors after a few months of operation and was then converted into a hospital. It is interesting to note that 11 of the new units were located in Dade and Pinellas Counties.

TABLE 51
HOMES WITH BED CAPACITY LICENSED UNDER FLORIDA
NURSING HOME LAW AND HOMES WITH BED CAPACITY
CEASING OPERATIONS, BY COUNTY, FLORIDA, 1963

COUNTY	NUMBER OF HOMES				BED CAPACITY			
	TYPE OF FACILITY				TYPE OF FACILITY			
	Nursing Homes	Homes for the Aged	Homes for Spec. Serv.	TOTAL NO.	Nursing Homes	Homes for the Aged	Homes for Spec. Serv.	TOTAL NO.
Alachua	1			1	40			40
Bay	1	1		2	77	10		87
Bradford	1			1	21			21
Brevard	5	1		6	165	42		207
Broward	14		1	15	552		35	587
Clay	1			1	18			18
Dade	37	9		46	2634	298		2832
Dixie	1			1	12			12
Duval	26	10		36	858	120		978
Escambia	6	2	1	9	130	27	52	209
Hardee	1			1	24			24
Hernando	1			1	37			37
Highlands	1			1	24			24
Hillsborough	29	1	3	33	1082	64	59	1205
Holmes	1	1		2	36	10		46
Indian River	2			2	64			64
Jefferson	1			1	36			36
Lake	5	2		7	126	24		150
Lee	4			4	163			163
Leon	2			2	47			47
Levy	1			1	6			6
Manatee	5	2		7	207	14		221
Marion	1			1	33			33
Martin		1		1		8		8
Monroe	2			2	29			29
Okeechobee		1		1		10		10
Orange	15			15	504			504
Osceola	3	4		7	64	48		112
Palm Beach	15	5		20	504	243		747
Pasco	3	4		7	43	60		103
Pinellas	43	6		49	2623	135		2758
Polk	16	6		22	427	121		548
Putnam	3	1		4	62	9		71
St. Johns	3	1		4	96	22		118
St. Lucie	2	2		4	31	44		75
Sarasota	6			6	363			363
Seminole	4	2		6	60	50		110
Sumter	1			1	25			25
Suwannee	1			1	26			26
Volusia	14	4	2	20	499	73	102	674
Washington	1			1	11			11
SUBTOTALS	279	66	7	352	11659	1432	248	13399

CEASED OPERATION IN 1963

Brevard	1			1	11			11
Dade	3			3	108			108
Duval	1			1	23			23
Hillsborough	1	1		2	8	18		26
Marion	1			1	14			14
Orange	1			1	270			270
Palm Beach		1		1		12		12
Pinellas	3			3	152			152
Polk	2	1		3	32	57		89
Sarasota	1			1	17			17
Seminole	1			1	14			14
Volusia	1			1	35			35
SUBTOTALS	16	3		19	684	87		771
TOTALS	263	63	7	333	10975	1345	248	12568

TRAINING AND EDUCATION

The Fifth Annual Nursing Home Short Course was presented at the University of Florida April 29 - May 3 by the Florida Institute for Continuing University Studies, Division of General Extension, with the cooperation and assistance of the SBH and the Florida Nursing Home Association. The theme was "Food Service—A Major Factor in Nursing Home Success." Eighty persons attended with about equal representation of administrators and nurses. The program focused on two core areas, food service and interpersonal relations. The Division of Nutrition participated in the planning and teaching.

Six local workshops were held in cooperation with Districts II and III Florida Nursing Home Association. A housekeeping series was presented in four programs covering cleaning techniques; equipment and supplies; personnel problems; and linen and laundry handling. Two workshops considered patient care responsibilities and modern concepts of restorative nursing.

Sixty-five consultation visits were made to 22 counties to assist clergy and church groups desiring to promote and sponsor nursing home facilities. In this connection, liaison was carried on with local, state and federal agencies, particularly the Florida Development Commission and Federal Housing Administration, with reference to determining community needs for nursing homes and financial arrangements for construction. Denominational nursing homes are under development in seven counties.

A program for undergraduate students was developed with the Department of Architecture, College of Architecture and Fine Arts, University of Florida. The purpose was to teach architectural students health concepts and principles in the design of medical care facilities. Instruction included student nursing home research, an orientation seminar, a field trip to acquaint students with operating facilities, an evaluation of original preliminary sketches and a critique of final designs by a special jury.

Five area nursing home and hospital fire protection conferences for paid and volunteer fire department personnel were conducted at Orlando, Panama City, Jacksonville, Tampa and Ft. Lauderdale. Cooperating organizations included the SBH and the following Florida organizations: State Fire Marshal's Office, State Fire College, State Fire Chiefs Association, State Firemen's Association, Nursing Home Association, Hospital Association, League of Municipalities, Association of County Commissioners, Association of County Health Officers, Association of Architects, Engineering Society and State Civil Defense Agency. The conferences drew a total attendance of approximately 500 firemen. The sessions were held to better acquaint fire service people with the particular character of medical care institutions and mutual problems related to fire hazards and patient safety; to consider the roles of fire protection personnel in the uniform interpretation and enforcement of the fire prevention aspects of laws and regulations; and to encourage closer working relationships between local fire departments and CHDs.

An ad hoc Committee for the Evaluation of Nursing Home Services continued its assigned objectives with the development of projects to test the practicability of an evaluation instrument it designed. This committee was formed to assist the State Department of Public Welfare, as a purchaser of nursing care services through its nursing home vendor payment program, to establish a basis for recommending a more realistic scale of payment for the care of recipients of public assistance in nursing homes.

Assistance was provided the Health Occupations Program of the State Department of Education in the development of a proposed state nurse's aide training program through participation in an advisory committee and consultation in the formulation of curricula and evaluation criteria.

BUREAU OF VITAL STATISTICS

EVERETT H. WILLIAMS, JR., M.S., Hyg.
Director

The organizational pattern of this bureau was changed during the past year. On July 1, 1963, the Data Processing Unit was given divisional status and transferred from General Administration to the Bureau of Vital Statistics. At the same time, the Statistics Section became the Division of Public Health Statistics. A Division of Vital Records was also established. It is believed that the grouping of these three divisions under one bureau will result in a better coordinated service. These three divisions have many overlapping functions requiring a considerable amount of cooperation and coordination.

During the year, a thorough study was made concerning the feasibility of ordering a computer for use by the State Board of Health (SBH). At the completion of the study, a 1401 Electronic Computer was ordered with a tentative installation date in mid-1964. Much work was done during the year in planning for the installation of the computer and writing programs. Some of the major programs have been converted to a computer operation and are now being processed after regular working hours at another installation.

The 1963 State Legislature enacted a bill increasing fees for certain of the special services performed by the Division of Vital Records. A fee in the amount of \$5.00 was established for the processing and filing of a correction to a birth record, for the filing of a delayed certificate of birth and for the filing of an amended birth certificate in cases of adoption or legitimation. The change in fees required many changes in work procedures and also resulted in many revised forms and instructional materials. By the end of the year, all procedures were working smoothly and it is estimated that the increased fees resulted in approximately \$17,000 additional revenue for the state for the year.

DIVISION OF VITAL RECORDS

EVERETT H. WILLIAMS, JR., M.S., Hyg.
Acting Director

This division is responsible for the collection and preservation of the following records: birth, stillbirth, death, marriage, annulment of marriage, divorce, adoption and legal change of name. It is responsible for the issuance of certified copies of most of these vital records and for processing of various types of amendments to the records. The records have legal value in that they are accepted by courts as legal proof of the facts stated thereon. In addition to their legal value, these records have statistical value for public health agencies and others interested in demographic studies.

Collection

Collection of records is one of the primary functions of the vital statistics system. The value of these records for both legal and statistical purposes is completely dependent upon the effectiveness of the collection system. The county health officers are registrars for their areas and are responsible for the collection of birth, stillbirth and death certificates. Particular emphasis has been placed upon promptness of filing birth and death records. Last year, 95.3 per cent of all birth and 97.7 per cent of all deaths were registered at this bureau by the fifth of the following month. In the case of births, this represents an improvement of four-tenths of one per cent over the preceding year, while the percentage of reports on time for deaths was unchanged. A total of 20 counties submitted 98 per cent or more of their birth records and 23 counties submitted 98 per cent of their death records within the prescribed time limit. Unfortunately, there are still a sizable number of counties which need considerable improvement in the timeliness of filing birth and death records. One measure of the relative efficiency between counties with regard to birth and death registration is the "Vital Statistics Scoreboard," which is published annually (Table 60). The top 10 units are to be congratulated on their superior performance. They are: Jacksonville-Duval, Sarasota, Hernando, Dade, Citrus, Broward, Seminole, Orange, Manatee and Alachua.

Last year, a total of 236,516 current certificates were registered with the division, an increase of 1.9 per cent over the preceding year.

Certifications

The issuance of certified photocopies and other certifications is one of the large volume jobs performed by the bureau. Last year, 118,108 requests for certifications were received and processed. Birth and death certificates are confidential records and certified copies are not issued to persons who cannot demonstrate the proper interest in the record. For those persons who are not entitled to receive certified copies of birth records, a birth registration card can be issued showing the name, date of birth and place of birth. Last year, a total of 21,929 birth registration cards were issued. Table 52 shows comparative data for other types of certifications issued during the past two years.

Amendments

One of the most complex and troublesome functions of the bureau is the amendment of records. Many requests are received to have records corrected. In each case, the applicant must submit evidence to substantiate his request, and bureau personnel must determine whether sufficient proof has been submitted to justify the correction. Every effort is made to correct minor errors as easily as possible while making sure that sufficient evidence is obtained for major corrections to maintain the legal validity of the record. A set of administrative regulations governing requirements for correction of records was passed by the SBH during the year and were fully implemented with revised forms, instructions and procedures during 1963.

Delayed Registration of Births

A "Delayed Birth Certificate" is one which is filed after the person's first birthday. An application for filing a delayed birth certificate must be accompanied by documents which verify the date of birth, place of birth and parentage. Requirements for documentary evidence must be sufficient to minimize the filing of fraudulent records and to make the record of sufficient value that it will be acceptable to other agencies and offices using these records as proof of birth. Bureau personnel must explain these requirements for evidence in writing and orally, and must determine when sufficient proof has been submitted. Last year, a total of 2772 delayed birth certificates were filed. This is a decrease of 14.8 per cent under the total for the preceding year. It is hoped that this function will continue to decrease and eventually disappear.

Adoptions

In 1963, there were 4271 adoption decrees received from the courts for children who were born in Florida. This represents a 1.1 per cent increase over 1962. When an adoption decree is received for a person born in Florida, a new birth certificate is submitted for the original certificate. The new certificate shows the new parents' names and does not disclose the fact of adoption. The original certificate is sealed and is only available upon receipt of a court order or upon receipt of a request from the registrant if he or she is of legal age. Adoption decrees received for persons born in other states are forwarded to the vital statistics office of the state of birth for similar processing. A total of 1164 adoption reports were forwarded by this office to other states during the year 1963.

DIVISION OF DATA PROCESSING

ARNOLD KANNWISCHER, B.S.
Director

This division performs two major functions: systems and procedures analysis and IBM data processing.

Systems and Procedures: This function consists of the analysis of present methods and systems of office performance, with the objective to simplify, improve, mechanize, or in some cases, eliminate a system. The principal aim is to afford a saving to the agency or increase the efficiency of a particular operation, especially in the areas of records handling and storage, forms design and the mechanization of hand operated procedures.

IBM Data Processing: The varied and expanded health programs within the State Board of Health (SBH), as well as the rapid growth of Florida, have led to an equally large production and accumulation of paper work. This has required a continuing increase in the mechanization of many of the manual record keeping procedures. This division now processes approximately 100 programs in the IBM section. These include one or more programs for almost every bureau or division of the SBH.

With this expansion of activities it has become necessary during the year to borrow IBM computer time from other state agencies as well as outside industry. In the early part of the year a feasibility study was completed to determine the need for an electronic computer. A careful administrative review of this feasibility study led to the ordering of a 1401 Electronic Computer, with a tentative installation date of mid-1964. A major effort during the past year was directed toward the writing of programs for the computer.

TABLE 52
ACTIVITIES OF THE BUREAU OF VITAL STATISTICS,
FLORIDA, 1962 AND 1963

Activity	1962	1963	Per Cent Change
Current certificates filed.....	231,997	236,516	+ 1.9
Delayed birth certificates filed.....	3,254	2,772	-14.8
Amended certificates filed for adoptions.....	4,255	4,271	+ 1.1
Adoption reports forwarded to other states.....	1,210	1,164	- 3.8
Legitimations processed.....	526	463	-12.0
Legal changes of name received.....	976	919	- 5.8
Requests for certifications:			
Total.....	122,149	118,108	- 3.3
Fee paid.....	98,800	94,500	- 4.4
Free.....	23,349	23,608	+ 1.1
Photostats made.....	134,254	131,003	- 2.4
Birth registration cards made.....	23,665	21,929	- 7.3
Fees collected and transmitted to State Treasurer.....	\$157,194.42	\$167,967.02	+ 6.9

DIVISION OF PUBLIC HEALTH STATISTICS

OLIVER H. BOORDE, B.S., B.A.
Director

This division is responsible for summarizing and analyzing data obtained from vital records and special studies. It also provides statistical support and consultation to all bureaus and divisions of the State Board of Health (SBH), as well as to County Health Departments (CHD).

During the year, the division publishes a monthly vital statistics bulletin which presents the latest available data on births, deaths, marriages and divorces. Accompanying the bulletin is a monthly article, written by the division staff, concerning various subjects of public health interest. This bulletin is distributed to CHDs, hospitals, libraries, schools and to persons expressing a desire to receive this type of information.

At the end of each year, the division publishes Supplement No. 1 (Florida Vital Statistics) to the SBH Annual Report—a complete summary and analysis of vital statistics for the year. Supplement No. 2 (Florida Morbidity Statistics) to the Annual Report is published by the division in cooperation with the Bureau of Preventable Diseases. This supplement is a review and analysis of cases of reportable diseases.

In addition to these formal reports the division throughout the year provided vital statistics data and analysis from unpublished sources to

physicians, faculty members and students of educational institutions and other persons having a need for this type of information.

In the area of statistical consultation, the division has experienced a continually increasing demand for its services. The consultation services provided consist of assistance in practically every phase of conducting a special study or survey, from concise statement of objectives, design of forms and sample framework, collection of data, methods of tabulating data, statistical analysis and interpretation to the presentation of the final report.

The division was involved in numerous special studies and surveys during 1963. Among the major projects initiated or completed during the year were the Statistical and Tabulating Center for Cancer Registry Data, the Saturization Immunization Program using birth certificate follow-ups, the Hillsborough County "Fite the Bite" Survey and the study of Nursing Care Needs of Nursing Home Patients. The Statistical and Tabulating Center for Cancer Registry Data is under the direction of the Division of Chronic Diseases. This program was begun in July 1963 and its principal objective is to gather the vast amount of valuable data being collected by the approved tumor clinics throughout the state into a central data collection unit. This unit is equipped to analyze and present summarized data to the medical staffs of the tumor clinics. In addition this pool of information should prove to be an invaluable tool for improving the effectiveness of the state's cancer research and service programs.

The Immunization Program is administered by the Bureau of Preventable Diseases and its objective is to raise the immunization level of preschool children against poliomyelitis, diphtheria, whooping cough, tetanus and smallpox. Birth certificates filed with the Bureau of Vital Statistics are being utilized as a means of contacting parents of young children. This division has been given the responsibility for designing procedures to determine the pre- and post-program immunization levels of 15-month-old children in counties participating in the project. The determination of these levels will provide a means of evaluating the effectiveness of the program and with the methods being employed should indicate which segments of the population require additional attention.

The division assisted the Hillsborough CHD in conducting a survey to evaluate the effectiveness of its "Fite the Bite" campaign. This campaign was aimed at encouraging the elimination of standing waters, which serve as mosquito breeding sources. The division constructed the sample design, supervised the collection and tabulation of data and analyzed the final results.

This division was not involved in initial planning, selection of sample or collection of data for Bureau of Special Health Services' study of Nursing Care Needs of Nursing Home Patients. However, the division was instrumental in establishing procedures for summarizing the survey data, analyzing the material and preparing the final report.

The research function in all phases of public health is increasing, which results in the need for more statistical assistance. The division

foresees the advisability of expansion to the point where a statistical specialist should be designated for each bureau involved in major research projects.

This report presents a brief summary of preliminary vital statistics for 1963. A more detailed analysis of these statistics can be found in supplement No. 1 to this report, entitled Florida Vital Statistics, 1963. Preliminary 1963 birth and death figures have been used in this report because of a time lag in receipt of records from the counties and the extensive processing required to summarize the data in final form. Final 1963 data concerning marriages, divorces and annulments are contained in Table 59; and Tables 56 and 58 present final 1962 natality and mortality figures.

Population

Florida's population was provisionally estimated at 5,639,900 as of July 1, 1963. This means the state has grown at the rate of approximately 17,650 persons a month since the 1960 U.S. Census, when the population was 4,951,560. It is estimated that natural increase (the difference between the number of persons born and the number dying) contributed about 5300 to the monthly growth figure, with the remaining 12,350 the result of new residents moving into the state.

The 1963 midyear estimate for the state's white population was 4,650,700. Since the 1960 U.S. Census there has been a monthly population gain among whites of 3500 due to natural increase and 11,500 from in-migration. On the other hand the nonwhite population which was estimated at 989,200 in 1963, showed a natural increase of 1800 and an in-migration of 850 persons per month since 1960.

Births

Preliminary figures indicate that a total of 114,641 babies were born to Florida residents during 1963. This is 607 fewer births (a decline of .5 per cent) than were shown by final 1962 data. Both race groups contributed to the slight yearly decrease in births, with a decline of 337 births among the whites (from 84,682 to 84,345) and 270 among the nonwhites (from 30,566 to 30,296).

The downtrend in natality is even more evident when birth rate figures are reviewed. Florida's birth rate has experienced a continual decline since reaching an "all time" peak of 24.7 births per 1000 population in 1956. Compared to the present birth rate of 20.3, this represents an 18 per cent drop in the last seven years. Both the white and nonwhite rates have been falling at approximately the same pace. It should be pointed out that this downward trend is not peculiar to this state, as national figures show a steady decline in the U.S. birth rate from 25.3 in 1957 to the provisional 1963 rate of 21.6 (down 15 per cent).

Deaths

Preliminary mortality data reveal that deaths among Florida residents increased 5.5 per cent from 1962 to 1963; totaling 55,543 this year

compared with 52,639 deaths the previous year. The death rate remained unchanged at 9.8 deaths per 1000 population.

The death rate for whites has been slowly but steadily rising over the last 10 years compared to a falling death rate trend among nonwhites. Both races have shown improvement in their mortality experience for practically every age group, but in the case of the white race the lowering of age specific death rates has been more than offset by the in-migration of a large number of elderly persons making Florida their retirement home. For example, in 1950 about nine per cent of the white population was over 65 years of age as compared to an estimated 13 per cent in this age group in 1963, while for nonwhites the percentage over 65 years old remained around five per cent for the entire period.

The ten leading causes of death with rates per 100,000 population in 1963, and with the comparative position of these causes in 1953 are presented in Table 54.

The relative positions of the first six causes have remained unchanged throughout the period. In fact there has been only slight change in all rankings during the period from 1953 to 1963. The major exceptions were "other diseases of the circulatory system" (consisting mainly of aneurysms, embolisms and thrombosis of the arteries) which experienced a substantial rise from 16th to seventh position and chronic nephritis which fell from eighth to 15th position. It is of interest to note that diseases of a chronic nature and thereby closely associated with aging, reveal rising mortality rates. While causes of death which are primarily risks of younger age groups, such as "diseases of infancy" and accidents, show declining death rates.

Infant Mortality

According to preliminary figures there were 3207 infant deaths among state residents in 1963. This represents a decline of 77 deaths compared to final 1962 data and is the net results of an increase of 14 infant deaths among whites (from 1887 to 1901) and a decrease of 91 nonwhite infant deaths (from 1397 to 1306).

The infant death rate per 1000 live births has changed little over past decade, with the rate for whites declining from 24.3 deaths per 1000 live births in 1953 to 22.5 in 1963 and the nonwhite rate dropping from 49.0 to 43.1. The rate for nonwhites continued to be about double the rate for whites.

Marriages and Divorces

There were 43,120 marriages in Florida in 1963 according to preliminary figures and this was a three per cent gain over the 41,504 marriages recorded in 1962.

The number of divorces and annulments also increased from 22,178 in 1962 to 22,910 in 1963 (up three per cent).

There were 1.9 marriages per each divorce in 1963 and 1962 compared to 1.4 marriages per divorce ten years ago.

TABLE 53
RESIDENT BIRTHS AND DEATHS WITH RATES
PER 1000 POPULATION, FLORIDA,
1940, 1950, AND 1953-1963

Year	Midyear Population Estimate	Births	Birth Rate	Deaths	Death Rate
1963*	5,639,900	114,641	20.3	55,548	9.8
1962	5,849,900	115,248	21.5	52,639	9.8
1961	5,158,100	116,688	22.6	48,690	9.4
1960**	5,005,000	115,610	23.1	47,937	9.6
1959**	4,790,000	112,733	23.5	44,179	9.2
1958**	4,571,000	108,014	23.6	43,353	9.5
1957**	4,245,000	108,806	24.5	39,987	9.4
1956**	3,941,000	97,320	24.7	36,705	9.3
1955**	3,670,000	89,112	24.8	33,295	9.1
1954**	3,462,000	84,831	24.5	31,608	9.1
1953**	3,284,000	80,087	24.4	30,529	9.3
1950**	2,821,000	64,370	22.8	26,525	9.4
1940**	1,915,100	33,696	17.6	21,458	11.2

* Provisional data.

** Revised population estimate.

TABLE 54
TEN LEADING CAUSES OF DEATH BY RACE, WITH RATES PER 100,000 POPULATION,
FLORIDA, 1953 AND 1963

1963 Rank	CAUSE OF DEATH	NUMBER OF DEATHS				RATE**				1953 Rank			
		1963***		1953		1963***		1953					
		Total	White	Non-white	Total	White	Non-white	Total	White		Non-white		
	TOTAL DEATHS.....	55,543	45,855	9,688	30,529	23,100	7,429	9.8*	9.9*	9.8*	8.8*	11.3*	
1	Diseases of the heart (400-443).....	20,102	17,731	2,371	10,336	8,502	1,834	356.4	381.3	239.7	314.7	278.8	1
2	Malignant neoplasms (140-205).....	9,470	8,265	1,205	4,536	3,854	682	167.9	177.7	121.8	138.1	103.5	2
3	Cerebral vascular disease (330-334).....	6,348	6,125	1,223	3,499	2,565	934	112.5	110.2	123.6	106.5	141.8	3
4	All accidents (800-992).....	3,237	2,515	722	2,108	1,566	542	57.4	54.1	73.0	64.2	59.7	4
5	Diseases of early infancy (760-776).....	1,934	1,207	727	1,522	963	559	34.3	26.0	73.5	46.3	84.8	5
6	Influenza and Pneumonia (490-493).....	1,784	1,228	556	1,004	522	482	31.6	25.4	56.2	30.6	19.9	6
7	Other circulatory diseases (451-468).....	925	798	127	248	202	46	16.4	17.2	12.8	7.6	7.7	7
8	General arteriosclerosis (450).....	892	805	87	540	444	96	15.8	17.3	8.8	16.4	16.9	8
9	Diabetes mellitus (260).....	878	658	220	417	306	111	15.6	14.1	22.2	12.7	11.7	9
10	Suicide (963, 970-979).....	726	697	29	342	320	22	12.9	15.0	2.9	10.4	12.2	10
15	Chronic & unsp. nephritis (592-594).....	353	231	122	418	263	155	6.3	5.0	12.3	12.7	10.0	8
11	Cirrhosis of the liver (581).....	621	561	60	343	303	40	11.0	12.1	6.1	10.4	11.5	10
13	Homicide (964,965, 980-999).....	516	190	326	343	90	253	9.1	4.1	33.0	10.4	3.4	10

*Rate per 1000 population.

**Based on midyear population estimates.

***Provisional data.

TABLE 55
RESIDENT DEATHS AND DEATH RATES BY CAUSE, BY RACE, FLORIDA, 1963 (PRELIMINARY)

CAUSE OF DEATH (Numbers in parentheses refer to the International List of Causes of Death)	DEATHS			Rate per 100,000 Population		
	Total	White	Nonwhite	Total	White	Nonwhite
	55,543	45,855	9,688	9.8*	9.9*	9.8*
ALL CAUSES.....	227	144	83	4.0	3.1	8.4
Tuberculosis of respiratory system (001-008).....	18	9	9	0.3	0.2	0.9
Tuberculosis, other forms (010-019).....	100	55	45	1.8	1.2	4.5
Syphilis and its sequelae (020-029).....	1	1	0	—	—	—
Typhoid fever (040).....	6	2	4	0.1	—	0.4
Dysentery, all forms (045-048).....	4	2	2	0.1	—	0.2
Scarlet fever and streptococcal sore throat (050, 051).....	1	1	0	—	—	—
Diphtheria (055).....	2	0	2	—	—	0.2
Whooping Cough (056).....	36	23	13	0.6	0.5	1.3
Meningococcal infections (057).....	4	0	4	0.1	—	0.4
Acute poliomyelitis (080).....	13	9	4	0.2	0.2	0.4
Acute infectious encephalitis (082).....	10	8	2	0.2	0.2	0.2
Measles (085).....	215	150	65	3.8	3.2	6.6
All other diseases classified as infective and parasitic (030 to 138 with exception of above causes)	9,470	8,265	1,205	167.9	177.9	121.8
Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (140-205)	878	558	320	15.5	14.1	22.2
Diabetes Mellitus (260).....	135	84	51	2.4	1.8	5.2
Anemias (290-293).....	29,046	24,991	4,055	515.0	537.4	409.9
Major Cardiovascular-renal disease.....	6,348	5,125	1,223	112.6	110.2	123.6
Cerebral vascular disease (330-334).....	20,102	17,731	2,371	356.4	381.3	239.7
Diseases of the heart.....	14	8	6	0.2	0.2	0.6
Rheumatic fever (400-402).....	456	417	39	8.1	9.0	3.9
Chronic rheumatic heart disease (410-416).....	15,562	14,250	1,312	275.9	306.4	132.6
Arteriosclerotic heart disease, coronary disease (420).....	1,262	1,035	227	22.4	22.3	22.9
Nonrheumatic chronic endocarditis and myocardial degeneration (421, 422).....	1,564	1,027	537	27.7	22.1	54.3
Hypertension with heart disease (440-443).....	1,244	994	250	22.1	21.4	25.3
Other diseases of heart (430-434).....	425	301	125	7.6	6.5	12.6
Hypertension without heart disease (444-447).....	892	805	87	15.8	17.3	8.8
General arteriosclerosis (450).....	925	798	127	16.4	17.2	12.8
Other circulatory disease (451-468).....	353	281	72	6.3	5.0	12.3
Chronic and unspecified nephritis (592-594).....	128	80	48	2.3	1.3	6.9
Influenza (480-483).....	1,656	1,168	488	29.4	25.1	49.3
Pneumonia (490-493).....	338	296	42	6.0	6.4	4.2
Ulcer of stomach and duodenum (540, 541).....	317	268	49	5.6	5.8	5.0
Intestinal obstruction and hernia (560, 561, 570).....	306	189	117	5.4	4.1	11.8
Gastritis, duodenitis, enteritis and colitis, except diarrhea of the newborn (543, 571, 572).....	621	561	60	11.0	12.1	6.1
Cirrhosis of liver (581).....	39	25	14	0.7	0.5	1.4
Acute nephritis and nephrosis (590, 591).....	95	78	17	1.7	1.7	1.7
Hyperplasia of prostate (610).....	37	13	24	0.7	0.5	1.7
Complications of pregnancy, childbirth and the puerperium (640-652, 660, 670-689).....	574	457	117	10.2	9.8	11.8
Congenital malformations (750-759).....	786	522	264	13.9	11.2	26.7
Birth injuries, postnatal asphyxia and atelectasis (760-762).....	137	63	74	2.4	1.4	7.5
Infection of the newborn (763-768).....	1,011	622	389	17.9	13.4	39.3
Other diseases peculiar to early infancy and immaturity unqualified (769-776).....	1,012	594	418	17.9	12.8	42.3
All other diseases (residual).....	3,841	3,135	706	68.1	67.4	71.4
Symptoms, senility, and ill-defined causes (780-796).....	1,509	1,228	281	26.8	26.4	28.4
Motor vehicle accidents (810-835).....	1,609	1,287	322	30.6	27.7	44.6
All other accidents (800-802, 840-962).....	726	697	29	12.9	15.0	2.9
Suicide and self-inflicted injury (963, 970-979).....	516	190	326	9.1	4.1	33.0
Homicide and operations of war (964, 965, 980-999).....	3,207	1,901	1,306	28.0***	22.5***	43.1***
Infant mortality (Deaths under one year of age).....	3,207	1,901	1,306	28.0***	22.5***	43.1***

*Rate per 1000 population.

**Rate per 10,000 live births.

***Rate per 1000 live births.—Less than 0.05 per 100,000 population.

TABLE 56
RESIDENT DEATHS AND DEATH RATES BY CAUSE, BY RACE, FLORIDA, 1962 (FINAL FIGURES)

CAUSE OF DEATH (Numbers in parentheses refer to the International List of Causes of Death)	DEATHS			Rate per 100,000 Population		
	Total	White	Nonwhite	Total	White	Nonwhite
	52,639	43,284	9,355	9.8*	9.9*	9.8*
ALL CAUSES.....	200	129	71	8.7	8.9	7.4
Tuberculosis of respiratory system (001-008).....	16	7	9	0.3	0.2	0.9
Tuberculosis, other forms (010-019).....	87	41	46	1.6	0.9	4.8
Syphilis and its sequelae (020-029).....	0	0	0	0.0	0.0	0.0
Typhoid fever (040).....	10	5	5	0.2	0.1	0.5
Dysentery, all forms (045-048).....	3	1	2	0.1	—	0.2
Scarlet fever and streptococcal sore throat (050, 051).....	1	0	1	—	—	0.1
Diphtheria (055).....	3	1	2	0.1	—	0.2
Whooping cough (056).....	18	16	2	0.3	0.4	0.1
Meningococcal infections (057).....	1	0	1	—	—	0.1
Acute poliomyelitis (080).....	47	40	7	0.9	0.9	0.6
Acute infectious encephalitis (082).....	11	5	6	0.2	0.1	0.6
Measles (085).....	188	124	64	3.5	2.8	6.7
All other diseases classified as infective and parasitic (090 to 138 with exception of above causes).....	8,814	7,732	1,082	16.4	17.2	11.2
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-206).....	760	596	164	1.4	1.3	1.9
Diabetes mellitus (260).....	117	82	35	2.2	1.9	3.7
Anemias (290-298).....	27,681	23,746	3,935	51.7	50.5	41.1
Major cardiovascular-renal disease.....	6,219	5,053	1,166	11.6	11.0	12.9
Cerebral vascular disease (330-334).....	19,016	16,702	2,314	36.4	35.2	41.9
Diseases of the heart.....	15	10	5	0.3	0.2	0.5
Rheumatic fever (400-402).....	460	413	47	8.6	8.4	9.4
Chronic rheumatic heart disease (410-416).....	14,798	13,540	1,258	27.6	26.6	30.6
Arteriosclerotic heart disease, coronary disease (420).....	1,132	959	173	2.2	2.1	2.8
Nonrheumatic chronic endocarditis and myocardial degeneration (421, 422).....	1,560	979	581	2.9	2.8	3.6
Hypertension with heart disease (440-443).....	1,001	801	200	1.8	1.8	2.0
Other diseases of heart (430-434).....	409	280	129	0.7	0.6	1.3
Hypertension without heart disease (444-447).....	894	787	107	1.6	1.5	2.1
General arteriosclerosis (460).....	324	217	107	0.6	0.5	1.1
Other circulatory disease (451-468).....	88	55	33	0.2	0.1	0.5
Chronic and unspecified nephritis (592-594).....	1,591	1,120	471	2.9	2.5	3.5
Influenza (480-483).....	332	293	39	0.6	0.6	0.7
Pneumonia (490-493).....	280	236	44	0.5	0.5	0.7
Ulcer of stomach and duodenum (540, 541).....	309	166	143	0.6	0.5	0.8
Intestinal obstruction and hernia (560, 561, 570).....	621	569	52	1.1	1.1	1.0
Gastritis, duodenitis, enteritis and colitis, except diarrhea of the newborn (548, 571, 572).....	64	36	28	0.1	0.1	0.2
Cirrhosis of liver (581).....	129	97	32	0.2	0.2	0.3
Acute nephritis and nephrosis (590, 591).....	54	23	31	0.1	0.1	0.2
Hyperplasia of prostate (610).....	606	466	140	1.1	1.0	1.4
Complications of pregnancy, childbirth and the puerperium (640-652, 660, 670-689).....	841	559	282	1.5	1.3	2.1
Congenital malformations (750-759).....	164	66	98	0.3	0.2	0.6
Birth injuries, postnatal asphyxia and atelectasis (760-762).....	953	573	380	1.7	1.5	2.2
Infection of the newborn (763-768).....	711	404	307	1.3	1.1	1.8
Other diseases peculiar to early infancy and immaturity unqualified (769-776).....	3,648	2,914	734	6.8	6.2	7.6
Symptoms, senility, and ill-defined causes (780-795).....	1,856	1,091	765	3.4	2.8	4.1
All other diseases (residual).....	1,754	1,246	508	3.2	2.8	4.1
Motor vehicle accidents (810-836).....	713	682	31	1.3	1.2	1.5
All other accidents (800-802, 840-962).....	478	168	310	0.8	0.7	1.0
Suicide and self-inflicted injury (953, 970-979).....	1,887	1,397	490	3.4	3.0	4.0
Homicide and operations of war (984, 985, 980-999).....	3,284	2,384	900	6.1	5.4	7.0
Infant mortality (Deaths under one year of age).....	1,887	1,397	490	3.4	3.0	4.0

*Rate per 1000 population.

**Rate per 10,000 live births.

***Rate per 1000 live births.

—Less than 0.05 per 100,000 population.

TABLE 57
ESTIMATED POPULATION AND RESIDENT BIRTHS, DEATHS, AND
INFANT DEATHS, BY RACE, BY COUNTY, FLORIDA, 1963
(PRELIMINARY)

Population 1963 Prov. Est.	COUNTY	Marriages	Divorces and Annulments	BIRTHS			DEATHS			INFANT DEATHS		
				Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
				114,641	84,845	30,296	55,543	45,855	9,688	3,207	1,901	1,306
5,639,900	STATE.....	43,111	22,893	114,641	84,845	30,296	55,543	45,855	9,688	3,207	1,901	1,306
86,500	Alachua.....	592	197	2,112	1,442	670	682	405	277	71	30	41
7,700	Baker.....	62	65	202	126	76	61	42	19	9	3	6
68,700	Bay.....	519	242	1,780	1,457	323	492	402	90	36	25	11
13,000	Bradford.....	85	58	279	200	79	114	95	19	8	7	1
150,800	Brevard.....	1,174	700	4,119	3,560	559	863	736	127	108	80	28
398,700	Broward.....	3,273	1,461	7,471	5,146	2,325	3,947	3,381	566	244	114	130
7,800	Calhoun.....	45	58	173	139	34	77	51	26	8	3	5
18,800	Charlotte.....	124	71	187	168	19	274	260	14	6	5	1
10,900	Citrus.....	119	77	167	133	34	141	128	13	3	2	1
19,700	Clay.....	122	62	522	424	98	170	142	28	15	12	3
21,300	Collier.....	238	67	485	378	107	178	141	37	12	11	1
22,000	Columbia.....	202	84	567	338	229	238	158	80	22	8	14
1,101,000	Dade.....	9,104	4,809	18,977	13,919	5,058	9,948	8,733	1,215	467	284	188
13,100	DeSoto.....	102	57	272	184	88	139	98	41	11	3	8
4,700	Dixie.....	47	30	135	109	26	34	27	7	2	2	0
503,700	Duval.....	2,920	2,057	12,387	8,979	3,408	4,053	2,769	1,284	334	198	186
191,400	Escambia.....	1,564	941	5,068	3,715	1,353	1,336	992	344	132	78	54
5,300	Flagler.....	56	150	108	40	68	48	22	26	4	1	3
7,300	Franklin.....	57	29	194	150	44	81	64	17	8	1	2
46,000	Gadsden.....	147	78	1,128	243	885	366	119	247	52	8	44
2,900	Gilchrist.....	36	10	61	66	15	33	28	5	2	1	1
3,200	Glades.....	33	36	66	42	24	24	16	8	5	4	1
9,600	Gulf.....	74	42	242	175	67	83	59	24	7	4	3
7,800	Hamilton.....	51	32	187	77	110	84	49	35	5	1	4
13,400	Hardee.....	162	236	288	248	40	143	129	14	13	10	3
10,600	Hendry.....	108	28	300	184	116	78	51	27	9	6	3
12,300	Hernando.....	150	52	251	181	70	168	140	28	6	4	2
24,200	Highlands.....	191	116	540	346	194	310	246	64	15	8	12
429,800	Hillsborough.....	3,429	1,861	9,346	7,453	1,893	4,298	3,611	682	261	197	64
11,100	Holmes.....	139	55	165	156	9	145	134	11	8	7	1
31,100	Indian River.....	268	116	630	403	227	346	291	55	17	11	6
37,200	Jackson.....	185	74	687	430	257	340	213	127	23	14	9
10,300	Jefferson.....	65	38	251	63	188	116	47	69	15	1	14
3,100	Lafayette.....	33	0*	56	41	15	32	26	6	2	0	2
62,400	Lake.....	475	960	1,229	847	382	814	676	138	31	9	22
68,900	Lee.....	568	220	1,239	913	326	696	574	122	38	17	21
32,600	Leon.....	481	264	1,821	1,210	611	567	327	240	64	31	33
11,300	Levy.....	98	50	232	120	112	124	86	38	8	4	4
3,000	Liberty.....	13	16	61	47	14	32	24	8	1	1	0
14,900	Madison.....	77	39	324	116	208	142	72	70	12	4	8
76,700	Manatee.....	639	246	1,139	807	332	1,086	975	111	24	17	7
59,500	Marion.....	452	185	1,283	746	537	648	444	204	38	18	20
21,800	Martin.....	168	86	412	285	127	223	171	52	10	6	4
55,800	Monroe.....	539	309	1,431	1,271	160	350	302	48	36	34	2
19,000	Nassau.....	99	49	441	313	128	159	110	49	13	2	11
65,800	Okaloosa.....	329	315	1,989	1,813	176	323	292	31	39	34	5
8,200	Okeechobee.....	110	21	244	205	39	69	52	17	10	8	2
297,000	Orange.....	2,335	503	6,673	5,861	1,312	2,454	2,047	407	164	105	59
21,000	Osceola.....	226	70	363	299	64	383	305	28	11	10	1
271,400	Palm Beach.....	2,048	822	5,279	3,509	1,770	2,819	2,216	603	150	75	75
39,400	Pasco.....	343	116	637	547	90	584	543	41	30	26	4
418,200	Pinellas.....	2,952	1,537	5,656	4,543	1,113	6,755	6,394	361	121	77	44
212,300	Polk.....	1,752	837	4,362	3,216	1,146	1,938	1,572	366	121	77	44
33,200	Putnam.....	238	412	804	496	308	330	228	102	20	13	7
32,200	St. Johns.....	224	226	633	409	224	358	255	103	18	4	14
43,800	St. Lucie.....	358	188	965	524	441	457	341	116	44	15	29
33,000	Santa Rosa.....	216	82	1,036	951	85	220	197	23	20	18	7
90,100	Sarasota.....	748	361	1,288	1,050	238	1,175	1,098	77	29	22	7
67,200	Seminole.....	443	243	1,510	1,098	412	554	380	174	58	31	27
13,400	Sumter.....	142	118	303	193	110	167	110	57	10	2	8
17,100	Suwannee.....	133	32	373	250	128	161	105	56	18	6	7
14,100	Taylor.....	108	37	318	213	105	155	100	55	12	9	3
6,400	Union.....	41	21	101	62	39	50	42	8	3	2	1
141,900	Volusia.....	1,080	500	2,480	1,815	665	1,998	1,717	281	76	41	35
5,300	Wakulla.....	43	15*	107	47	64	41	23	3	2	1	1
16,100	Walton.....	76	47	241	190	51	177	153	24	6	5	1
11,900	Washington.....	81	27	239	151	88	124	101	23	8	5	3

TABLE 58

ESTIMATED POPULATION, RESIDENT BIRTH AND DEATH RATES PER 1000 POPULATION AND RESIDENT INFANT DEATH RATES PER 1000 LIVE BIRTHS, BY RACE, BY COUNTY, 1962 (FINAL FIGURES)

COUNTY	Midyear Population Estimate 1962	BIRTH RATE			DEATH RATE			INFANT DEATH RATE		
		Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
STATE.....	5,349,900	21.5	19.3	32.0	9.8	9.9	9.8	28.5	22.3	45.7
Alachua.....	70,400	26.6	23.8	35.1	8.5†	6.6†	13.2†	30.9	12.8	68.3
Baker.....	7,700	22.7	19.7	33.5	7.1	7.0	7.6	40.0	25.4	70.2*
Bay.....	66,600	28.1	27.3	33.0	6.8	6.6	8.0	28.8	26.6	39.4
Bradford.....	12,900	22.1	20.3	28.0	9.5	9.4	10.0	31.6	34.8	23.8*
Brevard.....	134,700	28.3	27.0	39.1	6.1	5.9	7.9	23.3	21.4	33.8
Broward.....	377,000	19.6	16.2	36.7	9.4	9.6	8.4	28.8	20.0	43.3
Calhoun.....	7,500	23.6	21.9	32.5	11.2	11.3	10.8	33.9	36.2	25.6*
Charlotte.....	16,700	14.4	13.6	26.0	14.0	14.1	12.0	16.7	14.0	38.5*
Citrus.....	10,300	16.9	15.5	23.2	12.2	13.0	8.9	46.0	46.2	45.5*
Clay.....	19,000	24.9	24.0	30.4	7.9	7.6	9.6	29.6	30.7	24.4*
Collier.....	19,300	24.0	23.1	28.2	8.0	7.2	12.1	30.2	32.6	20.8*
Columbia.....	21,200	24.8	22.1	31.1	10.9	10.1	12.8	34.2	24.5	50.3
Dade.....	1,024,100	19.2	16.7	33.4	9.1	9.4	7.5	24.4	20.2	36.5
DeSoto.....	10,900	25.1†	23.7†	29.3†	11.0†	11.9†	8.6†	29.2	31.2	24.4*
Dixie.....	4,600	27.4	27.2	28.6	11.1	10.5	14.3	23.8	23.3	0.0*
Duval.....	482,600	26.1	24.8	30.2	8.2	7.3	11.2	28.6	23.6	42.2
Escambia.....	183,100	27.8	25.9	34.8	6.6	5.9	9.2	23.3	22.9	43.5
Flagler.....	4,100	24.1	17.6	34.4	17.1	16.8	17.5	80.8*	45.5*	109.1*
Franklin.....	7,100	22.7	22.1	24.7	13.4	13.2	14.0	24.8	24.2	27.0*
Gadsden.....	37,000	32.2†	18.9†	40.1†	9.7†	8.3†	10.6†	60.5	34.2	68.0
Gilchrist.....	2,700	20.0	18.3	33.3	13.7	13.8	13.3	74.1*	68.2*	100.0*
Glades.....	2,600	19.6	18.7	20.9	9.2	10.0	8.2	58.8*	35.7*	87.0*
Gulf.....	9,400	27.9	26.2	33.2	6.9	6.4	8.6	19.1	15.9	27.4*
Hamilton.....	7,700	26.5	23.3	30.6	11.4	11.4	11.5	39.2	20.0	57.7
Hardee.....	12,900	22.8	22.0	30.0	9.6	9.9	6.9	13.6	7.8	51.3*
Hendry.....	9,600	28.2	21.9	44.4	8.1	7.4	10.0	25.8	19.9	33.3
Hernando.....	12,000	24.1	19.6	41.2	10.3	11.6	5.6	27.7	21.5	38.8
Highlands.....	23,600	23.9	20.2	37.4	12.7	12.3	14.4	37.2	23.9	64.2
Hillsborough.....	413,000	22.5	20.9	32.1	10.0	9.7	11.7	29.9	25.6	46.8
Holmes.....	11,100	16.2	15.5	35.0	11.1	11.1	10.0	44.4	48.2	0.0*
Indian River.....	28,400	22.5	20.0	31.6	11.5	11.7	10.7	36.0	22.4	67.4
Jackson.....	34,900	19.5	17.6	23.8	9.2	9.2	9.3	26.4	18.9	38.6
Jefferson.....	9,200	27.5	20.0	32.5	12.2	10.3	13.5	47.4	0.0*	67.0
Lafayette.....	3,200	17.8	15.4	35.0	11.9	12.1	10.0	52.6*	23.3*	142.9*
Lake.....	61,700	19.0	16.3	30.2	12.3	13.1	9.1	37.5	26.0	63.4
Lee.....	65,300	19.4	17.3	30.7	10.1	9.9	11.4	29.9	26.2	41.1
Leon.....	64,200	24.9	23.8	27.3	8.1†	6.8†	10.6†	24.7	18.1	36.7
Levy.....	11,300	22.8	17.2	35.4	9.8	10.3	8.9	23.3	0.0	48.4
Liberty.....	3,100	21.0	20.0	26.0	5.8	5.8	6.0	15.4*	0.0*	76.9*
Madison.....	14,900	25.4	20.4	30.8	9.4	8.8	10.0	37.0	6.3	59.4
Manatee.....	75,200	15.0	12.7	27.9	14.0	14.6	10.5	31.1	28.5	37.7
Marion.....	56,600	23.4	20.2	29.4	10.4	9.7	11.6	23.4	16.1	32.6
Martin.....	19,400	20.3	17.6	30.5	11.2	11.2	14.8	40.7	18.5	90.2
Monroe.....	53,900	25.1	25.2	24.3	6.7	6.4	9.6	20.7	18.0	44.1
Nassau.....	18,300	23.1	21.2	28.7	7.8	6.9	10.4	21.3	20.6	22.7
Okaloosa.....	63,600	32.6	31.5	47.0	4.9	4.7	7.3	24.6	23.6	33.8
Okeechobee.....	7,700	27.3	25.6	35.4	7.7	6.6	13.1	28.6	30.5	21.7*
Orange.....	285,400	23.4	21.9	32.2	8.6	8.6	8.3	29.2	23.9	49.4
Osceola.....	19,500	17.3	15.2	35.2	16.8	16.7	47.3	37.9	37.9	81.1*
Palm Beach.....	252,900	20.6	17.9	29.7	10.6	10.8	9.6	29.9	19.7	50.7
Pasco.....	38,600	16.4	15.6	22.7	13.0	13.8	6.6	22.2	20.7	30.0
Pinellas.....	401,300	14.2	12.5	32.5	15.9	16.5	9.5	26.9	22.0	46.4
Polk.....	206,300	21.7	19.7	30.7	9.3	9.2	9.7	29.7	24.5	44.3
Putnam.....	33,000	23.9	21.2	30.1	10.0	9.6	10.9	27.8	18.6	42.3
St. Johns.....	30,500	22.1	19.8	28.1	10.9	10.5	11.7	34.2	16.0	67.8
St. Lucie.....	43,500	21.4	16.4	31.8	9.9	9.9	9.6	39.7	18.7	62.1
Santa Rosa.....	32,700	31.5	31.0	37.5	6.5	5.8	15.4	22.3	19.1	55.6*
Sarasota.....	84,500	16.1	14.4	31.8	13.0	13.4	10.0	28.0	19.2	65.1
Seminole.....	62,800	24.5	23.6	27.2	8.1	7.3	10.5	26.6	20.6	42.8
Sumter.....	12,400	22.7	16.5	40.0	12.4	13.0	10.9	42.6	33.3	53.0
Suwannee.....	16,200	22.4	20.0	28.7	9.8	9.6	10.2	22.0	8.5	46.5
Taylor.....	13,600	25.8	24.1	30.9	8.9	7.2	14.1	25.6	28.5	19.0
Union.....	4,400	23.2†	18.0†	43.3†	12.5†	12.3†	13.3†	49.0	47.6*	51.3*
Volusia.....	133,100	16.5	13.9	29.1	15.4	16.1	11.9	30.9	26.6	41.0
Wakulla.....	5,500	18.9	16.2	25.6	7.6	6.4	10.6	28.8	0.0*	73.2*
Walton.....	15,600	17.6	16.9	21.4	9.8	10.1	8.2	36.5	35.2	42.6*
Washington.....	11,500	18.4	14.7	33.5	12.9	12.1	16.1	37.7	7.4	90.9

*Based on less than 100 live births, which limits the significance of the rate.
†Large institutional population segments excluded from resident population base.

TABLE 59

MARRIAGES BY RACE, DIVORCES AND ANNULMENTS, BY COUNTY, FLORIDA, 1963

COUNTY	MARRIAGES			DIVORCES	ANNULMENTS
	Total	White	Nonwhite		
STATE.....	43,120	36,058	7,062	22,699	211
Alachua.....	602	463	139	198	1
Baker.....	61	43	18	65	0
Bay.....	520	424	96	240	2
Bradford.....	85	68	17	57	0
Brevard.....	1,178	1,026	152	694	6
Broward.....	3,274	2,767	507	1,448	13
Calhoun.....	44	39	5	60	0
Charlotte.....	122	115	7	71	0
Citrus.....	119	98	21	77	0
Clay.....	121	109	12	62	0
Collier.....	237	208	29	67	0
Columbia.....	203	146	57	84	0
Dade.....	9,058	7,826	1,232	4,735	74
DeSoto.....	102	87	15	57	0
Dixie.....	47	42	5	30	0
Duval.....	2,944	2,372	572	2,046	11
Escambia.....	1,564	1,242	322	918	21
Flagler.....	56	39	17	146	4
Franklin.....	55	41	14	29	0
Gadsden.....	143	84	64	77	1
Gilchrist.....	36	29	7	10	0
Glades.....	33	22	11	36	0
Gulf.....	74	53	16	42	0
Hamilton.....	50	31	19	32	0
Hardee.....	162	149	13	234	1
Hendry.....	107	83	24	28	0
Hernando.....	150	130	20	52	0
Highlands.....	192	139	53	114	2
Hillsborough.....	3,520	3,015	505	1,850	11
Holmes.....	138	127	11	55	0
Indian River.....	269	210	59	115	1
Jackson.....	186	144	42	74	0
Jefferson.....	65	24	41	38	0
Lafayette.....	34	29	5	0	0
Lake.....	465	368	97	963	6
Lee.....	570	488	82	219	1
Leon.....	475	350	125	259	5
Liberty.....	98	66	32	50	0
Madison.....	13	12	1	16	0
Manatee.....	76	54	22	39	0
Marion.....	628	514	114	245	1
Martin.....	454	325	129	134	1
Monroe.....	167	146	21	86	0
Nassau.....	543	493	50	308	1
Nassau.....	99	82	17	50	0
Okaloosa.....	332	316	16	322	0
Okeechobee.....	109	93	16	21	0
Orange.....	2,321	1,966	355	502	1
Osceola.....	226	187	39	69	5
Palm Beach.....	2,036	1,558	478	817	1
Pasco.....	346	312	34	115	1
Pinellas.....	2,955	2,672	283	1,518	19
Polk.....	1,745	1,440	305	828	9
Putnam.....	236	174	62	409	3
St. Johns.....	229	185	44	223	0
St. Lucie.....	353	242	111	188	1
Santa Rosa.....	216	195	21	81	2
Sarasota.....	744	677	67	359	2
Seminole.....	450	337	113	241	1
Sumter.....	145	105	40	117	1
Suwannee.....	136	105	31	32	0
Taylor.....	106	82	24	37	0
Union.....	41	31	10	21	0
Volusia.....	1,053	898	155	500	0
Wakulla.....	41	25	16	15	0
Walton.....	75	64	11	47	0
Washington.....	81	67	14	27	0

TABLE 60
VITAL STATISTICS SCOREBOARD
BASED ON PROMPTNESS AND COMPLETENESS OF
CERTIFICATES, BY COUNTY, FLORIDA, 1963

COUNTY	Rank	Per Cent of Certificates Filed on Time		Per Cent of Complete Certificates		Per Cent of Monthly Reports Submitted on time	Total Score (Maximum = 500)	Change from 1962 Total Score
		Births	Deaths	Births	Deaths			
STATE.....		95.3	97.7	99.7	99.6	93.7	486.0	- 0.1
Jax.-Duval.....	1	100.0	100.0	100.0	100.0	100.0	500.0	+ 0.1
Sarasota.....	2	99.8	99.8	99.4	99.6	100.0	498.6	+ 8.5
Hernando.....	3	100.0	98.9	100.0	99.5	100.0	498.4	+ 1.5
Dade.....	4	98.2	100.0	99.9	99.8	100.0	497.9	- 0.4
Citrus.....	5	99.3	99.2	99.3	100.0	100.0	497.8	- 0.3
Broward.....	6	97.8	100.0	99.9	99.8	100.0	497.5	+ 7.2
Seminole.....	7	99.5	99.5	99.6	98.8	100.0	497.4	+ 0.8
Orange.....	8	98.0	99.3	100.0	100.0	100.0	497.3	+ 0.7
Manatee.....	9	97.9	99.9	99.8	99.0	100.0	496.6	+17.5
Alachua.....	10	99.5	97.9	99.6	99.5	100.0	496.5	+ 6.7
Hillsborough.....	11	97.1	99.4	100.0	99.9	100.0	496.4	- 1.4
Martin.....	12	97.4	100.0	100.0	98.5	100.0	495.9	- 1.5
Monroe.....	13	98.8	99.7	99.5	97.8	100.0	495.8	+36.1
Volusia.....	14	99.0	97.7	99.4	99.6	100.0	495.7	- 1.6
Polk.....	15	97.8	98.9	99.7	99.3	100.0	495.7	+ 0.9
Hardee.....	16	99.0	98.3	99.5	98.3	100.0	495.1	+ 9.5
Franklin.....	17	99.4	94.4	100.0	100.0	100.0	493.8	+13.0
Lee.....	18	94.9	99.4	99.8	99.4	100.0	493.5	+ 7.9
Escambia.....	19	96.6	97.4	99.8	99.6	100.0	493.4	- 1.0
Palm Beach.....	20	94.3	99.2	99.8	99.8	100.0	493.1	+ 2.2
Baker.....	21	95.9	98.7	99.4	98.7	100.0	492.7	+ 6.7
Santa Rosa.....	22	97.2	94.2	99.7	99.4	100.0	490.5	+30.2
Pinellas.....	23	93.6	96.6	99.9	99.9	100.0	490.0	- 3.9
Washington.....	24	98.6	91.6	100.0	99.0	100.0	489.2	+ 2.3
Walton.....	25	96.6	92.1	99.6	100.0	100.0	488.3	+ 5.0
Suwannee.....	26	99.7	99.2	100.0	97.6	91.7	488.2	+ 1.3
Nassau.....	27	91.4	97.6	99.0	98.4	100.0	486.4	+52.4
Gulf.....	28	90.4	98.5	97.3	100.0	100.0	486.2	+ 2.6
Bay.....	29	97.4	91.6	99.7	96.8	100.0	485.5	- 2.5
St. Lucie.....	30	95.9	91.2	99.6	98.7	100.0	485.4	+ 0.3
Clay.....	31	91.8	95.5	99.5	98.5	100.0	485.3	- 7.1
St. Johns.....	32	93.4	94.4	99.3	98.1	100.0	485.2	+ 5.8
Liberty.....	33	90.0	94.4	100.0	100.0	100.0	484.4	+42.7
Madison.....	34	97.8	100.0	97.8	96.9	91.7	484.2	+22.7
Charlotte.....	35	88.8	96.6	98.4	100.0	100.0	483.8	+ 6.7
Lake.....	36	91.2	93.1	99.1	98.9	100.0	482.3	+ 2.9
Brevard.....	37	95.3	97.0	99.2	98.5	91.7	481.7	- 2.4
Leon.....	38	88.2	95.1	99.7	98.7	100.0	481.7	+48.6
Putnam.....	39	89.3	93.6	98.7	99.0	100.0	480.6	- 4.6
Hamilton.....	40	97.7	83.3	99.2	98.3	100.0	478.5	+ 0.6
Jefferson.....	41	98.9	97.0	98.9	100.0	83.3	478.1	- 9.8
Hendry.....	42	89.4	96.9	99.2	100.0	91.7	477.2	+ 0.4
Flagler.....	43	98.7	95.1	98.7	100.0	83.3	475.8	+ 4.0
Indian River.....	44	98.9	95.7	97.7	99.7	83.3	475.3	-10.6
Okeechobee.....	45	90.7	83.3	100.0	100.0	100.0	474.0	- 4.7
Bradford.....	46	100.0	99.2	100.0	96.8	75.0	471.0	-16.6
Taylor.....	47	88.3	89.8	99.4	100.0	91.7	469.2	-13.7
Glades.....	48	100.0	100.0	100.0	85.7	83.3	469.0	+77.3
Wakulla.....	49	100.0	83.3	92.3	100.0	91.7	467.3	- 3.9
Holmes.....	50	93.4	82.1	97.5	100.0	91.7	464.7	- 1.8
Lafayette.....	51	81.0	88.2	95.2	100.0	100.0	464.4	+48.6
Highlands.....	52	78.5	94.7	99.5	99.7	91.7	464.1	-17.8
Levy.....	53	93.2	71.3	98.6	98.9	100.0	462.0	-21.4
DeSoto.....	54	95.8	100.0	99.7	98.6	66.7	460.8	-10.7
Marion.....	55	65.4	94.7	99.2	99.4	100.0	458.7	+ 3.1
Collier.....	56	79.0	97.3	99.3	95.1	83.3	454.0	-17.4
Osceola.....	57	56.0	99.4	97.9	98.4	100.0	451.7	-11.7
Calhoun.....	58	72.4	79.1	99.4	100.0	100.0	450.9	- 7.1
Gadsden.....	59	65.6	86.9	99.0	99.0	100.0	450.5	-12.6
Gilchrist.....	60	77.8	71.4	100.0	100.0	91.7	440.9	-26.1
Sumter.....	61	71.4	70.3	100.0	100.0	91.7	433.4	-10.4
Jackson.....	62	61.5	71.1	98.1	98.8	91.7	421.2	-18.6
Columbia.....	63	56.3	84.9	98.0	98.6	83.3	421.1	-15.0
Dixie.....	64	50.0	68.4	91.7	100.0	100.0	410.1	-26.9
Union.....	65	58.5	83.7	98.1	100.0	66.7	407.0	-40.2
Okaloosa.....	66	76.7	76.5	99.5	98.2	33.3	384.2	-49.5
Pasco.....	67	69.6	83.8	97.2	99.2	25.0	374.8	-43.7

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